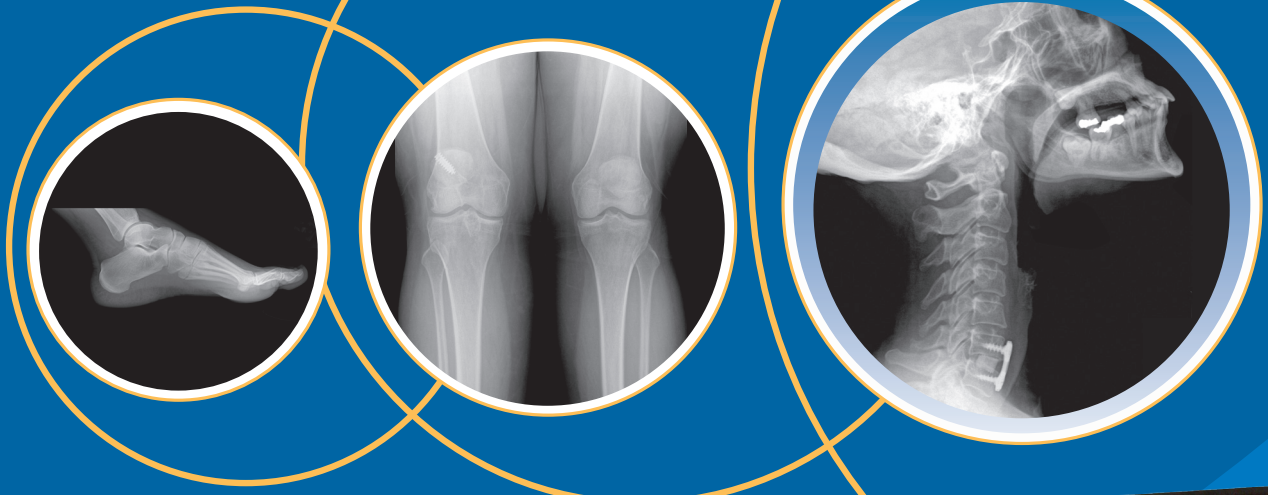
VERTX

USER MANUAL



iCRco

Digital Imaging Made Simple.™

Foreword

Proprietary Notice and Disclaimer

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iCR VERTX®, www.icrcompany.com and QPC XSCAN32 are the trademarks of ***i***CRco. All other trademarks are the property of their respective owners, and are hereby acknowledged.

Terms

Any one of the following ***i***CR products will be referred to as the "CR unit" throughout this document: ***i***CR VERTX®.

Contact Information

iCRco., Inc.
Address: 2580 West 237th Street Torrance, CA, 90503
Telephone: 310.921.9559
FAX: 310.776.7960
Email: info@icrcompany.com
Web: www.icrcompany.com

VERTX Information

Please Enter the details of the VERTX system here:

CR Model: _____

Serial Number: _____

Date Purchased: _____

Interface Type: USB 2.0

Contents

1 Safety Information **5**
1.1 Notes, Notices, and Cautions 5
1.2 Laser Safety 5
1.3 Electrical Hazards 6

2 Introduction **7**
2.1 Overview 7
2.2 FCC Notification 7
2.3 *i*CRco Warranty 7
2.4 Hardware Limited Warranty 7
2.5 Software Limited Warranty/Support 8
2.6 Warranty Product Technical Requirements 9
2.7 Requesting Warranty Service 9
2.8 Additional Warranty Limitations and Extent of Warranty 10
2.9 Limitation of Remedies and Liability/Exclusion of Damages 10

3 Pre-Installation **12**
3.1 Voltage Requirements 12
3.2 Environmental 12
3.3 Systems Specifications 12
3.4 Physical requirements 13
3.5 Connectivity and power supply 13

4 Packing List **14**

5 Unpacking / Setup Instructions **15**

6 Driver and Software Installation **16**
6.1 Installing USB drivers 16
6.2 Installing QPC XSCAN32 16
6.3 Initializing the VERTX Driver 19
6.4 Installing Ampronix External Monitor Drivers 20
6.5 Monitor Configuration 22
6.6 Network Configuration 24

7 Hardware Installation **26**
7.1 Hardware Setup Diagram 26
7.2 PC Specifications 27
7.3 VERTX USB 2.0 Installation 27

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7.4 Power Switch Locations 27
7.5 Installing AC Power Cord 27
7.6 International Power Cable 28
7.7 Power and Scan Lights 28
7.8 Cart Mounting Instructions 28

8 Acquiring an Image 36

9 QPC XSCAN32 Software Functions 43
9.1 Creating/Editing Patients 43
9.2 Default Mouse Functions for Image Manipulation 43
9.3 Image Processing Dialog Box 44
9.4 Annotations 50
9.5 Patient CD/DVD Creator 58
9.6 Associating a Barcode with a Study 59
9.7 Finding Barcodes and Scanning Images 60
9.8 Archiving QPC XSCAN32 Database 61
9.9 Restoring Archived Database 62
9.10 Searching QPC XSCAN32 Archive 62
9.11 QPC XSCAN32 Keyboard Shortcuts 63
9.12 Modality Worklist Query 64
9.13 Report Writer 66
9.14 Setting Up DICOM Send 67
9.15 DICOM Send 68
9.16 DICOM Retrieve 69
9.17 Advanced DICOM Printer 71
9.18 Printing to a Windows Printer 78
9.19 Troubleshooting Windows to DICOM Print 78
9.20 DICOM Store and Forward Utility 80

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1. Safety Information

Be sure to read and understand the installation and operating instructions before applying power to the VERTX unit.

HI POT TEST COMPLETE
BY:
DATE:
US and International Patents Granted
100-240V
DANGER
VISIBLE AND/OR INVISIBLE LASER RADIATION, AVOID DIRECT EXPOSURE TO BEAM
CLASS 3b LASER
900-0054-01
AVOID EXPOSURE VISIBLE and / or INVISIBLE LASER RADIATION IS EMITTED FROM THIS APERTURE
iCRco
The Innovative CR Company
FDA
CE
FDA 510K Cleared
100 - 240 V, 2.3/1.2 A, 50/60HZ
CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE.
FUSE 250VN, T3A

1.1 Notes, Notices, and Cautions

⚠ DANGER: A DANGER indicates that personal injury may occur if the Service person does not perform the procedure correctly.

⚠ WARNING: A WARNING indicates that a user must be constantly aware of something that may prove hazardous.

⚠ CAUTION: A CAUTION indicates that damage to the product may occur if the user does not perform the procedure correctly.

Notice: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

Note: A NOTE indicates important information that helps you make better use of your VERTX unit and Software.

1.2 Laser Safety

The VERTX unit incorporates a Class 3B 658 nm Red $\geq$ 15mw high-power solid-state laser diode. The VERTX covers protect the service person from direct exposure to laser light. These covers will protect a user/service person only if they are properly installed.

Covers must be removed and replaced by properly trained service personnel. Contact *i*CRco if there are any issues with the covers being damaged and replace them.

⚠ CAUTION: This equipment employs a laser. Laser radiation may be present if the VERTX unit is operated without covers. Avoid laser beam. Direct eye exposure to laser light must be avoided.

1.3 Electrical Hazards

The equipment must be serviced by properly trained technicians certified by *i*CRco Inc. Do not connect the VERTX unit with a damaged or sub-standard power cable. Do not use an extension cord with this device. The VERTX unit should be properly grounded and power connections inspected to ensure safe operation. Use at least a 1500VA (1500W) uninterruptible power supply (UPS) with this device, as it is sensitive to variations in power.

Notice: The VERTX unit must be connected to a uninterruptible power supply (UPS). Failure to use a (UPS) will void the warranty.

⚠ WARNING: This equipment is operated with hazardous voltages which can shock, burn or cause death.

2. Introduction

2.1 Overview

The VERTX unit is an ultra high resolution Computed Radiography (CR) device. It is designed to scan cassettes containing phosphor screens (CR plates) using patented technology. CR plates are transported past a scanning head without bending or using rollers. This True Flat Scan Path © results in ultra high resolution images with high fidelity across the entire image. High resolution is achieved from the CR plates by coupling the True Flat Scan Path © with a high energy laser.

The VERTX unit collects 16 bits (65,536 possible gray levels) data that is converted to a DICOM 3.0 image and can be stored, viewed, manipulated, and sent to any other storage device, printer, or viewing station through the medical transfer protocol specified by DICOM. This document contains a basic technical overview of the VERTX unit and driving software subsystems. A general description of the systems functionality and user interfaces will be described. Unpacking of the hardware and software installation. This document is intended for users who need to understand the basic principles of operation for the VERTX unit.

2.2 FCC Notification

This equipment generates, uses, and can radiate radio frequency energy, and if not installed properly, can cause interference with radio communications.

2.3 *i*CRco Warranty

iCRco Inc. ("***i***CRco") values your business and always endeavors to provide high quality products and services. All ***i***CRco products are provided with an initial warranty so you are covered from the date you purchase them. This limited warranty solely applies to new products manufactured by or for ***i***CRco and originally purchased from ***i***CRco or an authorized dealer of ***i***CRco products for your own use. In addition, an extended warranty is available for most new and recently purchased ***i***CRco products for an additional charge.

2.4 Hardware Limited Warranty

iCRco warrants its hardware products to be free of defects in materials and workmanship for a period of one (1) year from the date of original shipment from ***i***CRco subject to the limitations set forth herein. ***i***CRco phosphor plates sold with and for use in ***i***CRco cassettes are warranted to be free of defects in materials and workmanship for a period

of (3) years from the date of original shipment subject to limitations set forth herein. If a product proves to be defective in material or workmanship during the warranty period, ***i***CRco will, at its sole option, repair or replace the product with a similar product. Repaired and replacement products may be or include refurbished or remanufactured parts. Any replacement item assumes the remaining warranty period of the original product. ***i***CRco provides no warranty for any third party hardware or software included with any product or later acquired.

2.5 Software Limited Warranty/Support

iCRco warrants that its QPC XSCAN32 software originally provided with any product will substantially conform to ***i***CRco's specifications and that the media, not including hard drives, on which the software is furnished will be free from defects in materials and workmanship under normal use for a period of one (1) year from the date of original shipment from ***i***CRco. ***i***CRco's sole obligation under this warranty is limited to making reasonable efforts to ensure such conformity and to supply the consumer with a corrected version of the software as soon as it is practical after the consumer has notified ***i***CRco of any non conformity. ***i***CRco does not warrant that the operation of any software will be uninterrupted, glitch or error free or that functions contained in the software will operate in the combinations which may be selected for use by the user or meet the user's requirements. This limited software warranty will be void if the software is modified without the written approval of ***i***CRco or is used outside of the recommended parameters or equipment. ***i***CRco does not provide any warranty or support for any other software.

iCRco agrees to provide one (1) year of telephonic and/or e-mail based support for QPC XSCAN32 software originally provided with any new ***i***CRco product from the date of original shipment from ***i***CRco. All software support shall be limited to making reasonable efforts to resolve ***i***CRco software issues and shall be limited to ***i***CRco's regular business hours. In addition, ***i***CRco will provide revisions and upgrades to its software upon request (when available) during the first year after the software was originally shipped from the ***i***CRco factory. The initial support period will include support via remote login software (GoToMeeting), only if the customer has access to the Internet from that PC and only if the customer agrees ***i***CRco shall have no liability in connection with its support efforts. Remote login software allows ***i***CRco technical support to remotely access the customer's PC via the Internet for the purposes of rendering technical support. Please note that this warranty, including software support, does not include computer hardware, third party software or operating system or network issues, which are outside the control of ***i***CRco.

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2.6 Warranty Product Technical Requirements

iCRco requires that all CR, Scanner and/or products requiring PCs be fitted and installed with an uninterruptible power supply (”UPS”). ***i***CRco recommends the 1500VA specification UPS or equivalent. For warranty evaluation and service, ***i***CRco requires the customer to provide a network drop (DSL or Dial up) or the minimum of a phone line accessible by extension cord to the product enabling ***i***CRco technicians to perform remote diagnostics on installed equipment. In addition, each ***i***CRco product must be installed, maintained and operated in accordance with the respective product manual. Failure to comply with these requirements will result in a voided warranty claim.

2.7 Requesting Warranty Service

For information on obtaining warranty service, call ***i***CRco's customer support at (310)921-9559. In order to evaluate a warranty service request, ***i***CRco requires the following information: the ***i***CRco serial number of the product; a detailed description of the problem; customer name and contact information; product location and operating conditions; a copy of the purchase documents; and sufficient information and authorization, including a liability release as to any loss of data (which should always be backed up), software or network injury, or downtime, allowing ***i***CRco technicians remote access to the product. Product may not be returned to ***i***CRco without first obtaining a Return Material Authorization (“RMA”) number from ***i***CRco. Prior to providing an RMA, ***i***CRco may require remote access to the product. If ***i***CRco determines that the product may be defective, is under warranty and necessitates a return to ***i***CRco for service, an RMA number and instructions for return of the product will be given. ***i***CRco is not responsible for any unauthorized returned product, i.e. one for which an RMA number has not been issued by ***i***CRco.

Warranty service requires all authorized returns be shipped to the ***i***CRco factory prepaid and insured. All such authorized returns are the customer's responsibility. For products sold and located within the United States, ***i***CRco will pay for return shipping.

Products being returned are only to be shipped in ***i***CRco approved shipping containers. The original box and packaging materials are approved and should be kept for moving and/or shipping the product. Original and approved packaging my also be purchased from ***i***CRco. ***i***CRco shall have no liability nor responsibility for warranty service to any product that is not shipped in an ***i***CRco approved shipping container or that is damages from incorrect packaging or damage during shipping.

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2.8 Additional Warranty Limitations and Extent of Warranty

This warranty does not apply if the product has been damaged by accident, misused or abused. In addition, warranty service does not include the repair of failures or defects caused by: unauthorized attachments to any ***i***CRco product; unsuitable physical or operating environment, maintenance or repair by anyone other than ***i***CRco or the ***i***CRco authorized dealer that sold the product, operation of a product beyond its duty cycle; use of the product outside of its specifications; the use of supplies, parts, materials, software, or interfaces not furnished, authorized or recommended by ***i***CRco. If the product, including any software has been opened, tampered with, modified or altered in any way without written authorization by ***i***CRco, the warranty will also no longer apply.

This warranty applies only to products manufactured by, or for, ***i***CRco, and that can be identified by "***i***CRco" serial number as originally affixed to the product. Any modification to the ***i***CRco serial number tag or its attachment to the product shall immediately void this warranty.

This warranty is non-transferable and subsequent owners must contact ***i***CRco to establish if the equipment is eligible for an extended warranty.

There are no warranties, express or implied, with respect to any *i*CRco product other than as specifically set forth herein, and *i*CRco specifically disclaims any implied warranties or conditions of merchant ability, fitness for a particular purpose, and satisfactory quality. Any warranties that may not be disclaimed under applicable law are limited in duration to the initial warranty period and no warranties, express or implied, will apply after this period. All information, specifications, prices, and services are subject to change at any time without notice.

2.9 Limitation of Remedies and Liability/Exclusion of Damages

The exclusive remedy for any defective product is limited to the repair or replacement of the defective product. ***i***CRco shall have a reasonable time after determining that a defective product exists to repair or replace a defective product. ***i***CRco's entire liability for any product is limited to the actual purchase price for the product. This limitation applies even if ***i***CRco cannot or does not repair or replace any defective product and your exclusive remedy fails of its essential purpose.

In no event will ***i***CRco be liable for any general, special, consequential or incidental damages, including but not limited to, damages related to the loss of use, loss of recorded product, the installation of replacement product, or any inspection, testing, or redesign

caused by any defect or by the repair or replacement of any product arising from a defect in any product. This exclusion of damages applies even if the customer advises ***i***CRco or an ***i***CRco dealer of the possibility of such damages.

This limitation of remedies also applies to claims against any suppliers or dealers of ***i***CRco. ***i***CRco's and its suppliers' and dealers' limitations of remedies are not cumulative. Such suppliers and dealers are intended beneficiaries of this limitation. ***i***CRco is not liable for any claim by or against the customer arising from a third party claim.

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3. Pre-Installation

3.1 Voltage Requirements

The VERTX unit incorporates an international auto-switching power supply. ***i***CRco employs CE certified medical grade universal power supplies to allow the unit to work between 90 to 253V AC 50/60Hz. In order to run the unit with different power types, apply voltage to the power input module at the end of the VERTX unit. For international units, a local power cord must be used that can handle the power requirements of the unit. A 13A/220V power cord is sufficient.

3.2 Environmental

The VERTX unit should not be placed in a room with a film processor present. This will void the warranty. The humidity and temperature limits are 20 to 95% non-condensing, and 59°F to 95°F (15°C to 35°C), operating, respectively. The room should have good ventilation. Another factor to consider prior to installing the VERTX unit is dust and particulates in the environment. The VERTX unit is designed to be resistant to dust and particulates that may be present at the installation site. This is accomplished by 3 systems that work together to ensure that the unit remains clean.

1. The cooling fan circulates air into the device. There is a filter in front of the fan to ensure that the air in the VERTX unit is clean.
2. The cooling fan ensures that the pressure in the case is slightly higher than the outside pressure, thus dust and dirt do not enter the device through the scan head.
3. All the optics are sealed in the optic cavity, separate from the electronics. Although these systems are in place, in a dusty environment, small amounts of dust and/or dirt may enter the optic cavity. This dust could affect image quality. To prevent this potential issue, it is recommended that the unit be installed and operated in a clean, dry environment.

3.3 Systems Specifications

Cassette Sizes	Pixels per Line Resolution
14x17in, 10x12in (the VERTX uses ***i***CRco digital X-ray cassettes that comply with all standards for conventional X-ray cassettes).	3500 (High Resolution) over 14 inches (356mm) 2048 (Normal Resolution) over 14 inches (356mm).

Scan Rate

Scan Rate 60 lines/second

Grey Scale Resolution

16 bits (65,536 shades of gray)

Interface

USB 2.0

Dimensions

iCR VERTX: 34.9H x 20W x 6.7D inches

Power Requirements

Domestic: 100 to 120V, 50/60Hz, 3.5A
International: 220 to 240V, 50/60Hz, 1.75A

Temperature Conditions

59°F to 95°F (15°C to 35°C) – operating
0°F to 150°F (-18°C to 65°C) – non-operating

Humidity

20 to 95% non-condensing

Vibration/Acceleration

3-4G Max (in shipping)

Altitude

0 to 9,500 ft. - operating

Weight

59 lbs (without accessories)

Warm Up Time

Five (5) minutes.

3.4 Physical requirements

The VERTX unit requires a stable operating environment. It is important the system is placed where it will not be susceptible to tipping over or falling. Please ensure that the base plate is properly installed. Optionally, the VERTX unit can be mounted to the wall or to a mobile cart.

3.5 Connectivity and power supply

The room needs to have wall power and should not be used with an extension cord. Please use at least a 1500VA (1500W) UPS between the wall power and the VERTX unit. It is also required to have a network connection for fast technical support. Alternatively, the user must have a phone/fax line that can be connected to the PC as a minimum to comply with ***i***CRco warranty terms.

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4. Packing List

⚠ WARNING: The UPS *CAN NOT* ship with the battery connected. Upon unpacking the VERTX and its accessories, the UPS will need to have the battery reconnected.

Box 1: Scanning

1. (1) VERTX Scanner with AC cord attached
2. (1) USB 2.0 cable
3. (1) Suspension Mounting Kit

Box 2: Accessories A

1. (4) 14 x 17″ Cassette
2. (4) 10 x 12″ Cassette
3. (1) 14 x 17″ Grid Cap
4. (1) 10 x 12″ Grid Cap
5. (2) Panasonic Toughbook CF-52 Laptops and (2) AC adapters
6. (1) EZCR din Test Tool

Box 3: Accessories B

1. (1) APC 1300 UPS
2. (1) 19″ FIME 2MP Monitor & (1) USB cable & (1) Power Cord
3. (1) Network Switch & (1) Network Switch Power Supply
4. (1) 100ft CAT-5 Cable
5. (1) 15ft CAT-5 cable
6. (1) External Hard Drive & (1) AC Adapter and (1) USB Cable
7. (4) 100 CD spindles and (4) CD Envelopes

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5. Unpacking / Setup Instructions

1. Remove the Uninteruptable Power Supply (UPS) from the box.
2. Make sure to connect the red wire to the battery terminal (remove the bottom panel from the UPS and plug the red wire into the battery terminal).
3. Plug the UPS into a stable, standard 120 AC power outlet.
4. Remove the VERTX from the box.
5. Plug the VERTX into the UPS battery backup (the bottom set of outlets on the UPS).
6. Remove the Acquisition Toughbook (the one with two strips of Velcro on the bottom) and AC adapter from the box.
7. Plug one end of the AC adapter into the Toughbook and the other end into UPS surge protector outlet (the Toughbook has its own battery backup).
8. Connect one end of the USB cable into the VERTX USB plug and the other end into the Acquisition Toughbook USB port.
9. Remove the Viewing Toughbook and AC adapter from the box.
10. Plug one end of the AC adapter into the Toughbook and the other end into UPS surge protector outlet.
11. Remove the external hi-resolution display and AC adapter from the box.
12. Plug the AC adapter into a standard AC power outlet.
13. Plug the USB cable into a USB port on the Viewing Toughbook.
14. Remove the network switch, AC adapter and two Ethernet cables from the box.
15. Plug one end of the AC adapter into a standard AC power outlet and the other end into the network switch.
16. Plug the 100 foot Ethernet cable into the Ethernet port on the back of the Acquisition Toughbook, then plug the other end of the Ethernet cable into port 1 of the network switch.
17. Plug the 15 foot Ethernet cable into the Ethernet port on the back of the Viewing Toughbook, then plug the other end of the Ethernet cable into port 2 of the network switch.
18. Turn ON the UPS, both Toughbooks, the external hi-resolution monitor, and the VERTX unit (there is no switch for network switch).
19. Verify everything is ON and working.

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6. Driver and Software Installation

The computer hardware necessary to interface with the VERTX is shipped to the customer with all needed drivers and software installed. If the need arises, the following section describes how to install the software.

The "standard" military deployment consists of the following software components: **Drivers**: ***i***CR VERTX (installed when QPC XSCAN is installed), Ampronix external USB display, external hard drive DiskGo HD. **Software**: QPC XSCAN.

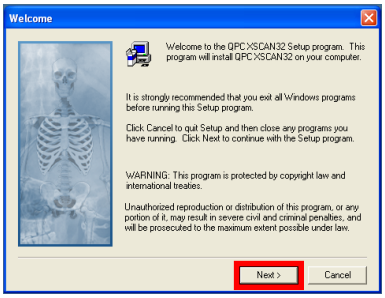
6.1 Installing USB drivers

USB drivers are automatically installed while installing QPC XSCAN32.

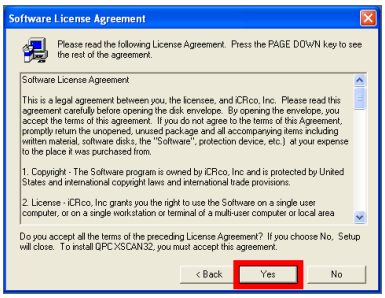
6.2 Installing QPC XSCAN32

QPC XSCAN32 software comes bundled with the VERTX unit. This software package will allow the user to interface with the VERTX unit.
Note: If you have QPC XSCAN32 already installed on your computer and it is running while you are trying to install the new version, an error will appear in the install process. Please close QPC XSCAN32 and reinstall the new version.

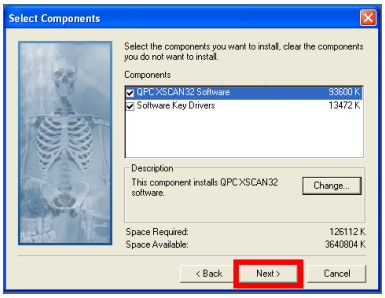
1. Insert the media containing the QPC XSCAN32 installer into the computer. Navigate to the *QPC XSCAN32* folder.
2. Launch the QPC XSCAN32 installer by double clicking **Setup.exe**.
3. Click **Next** at the welcome screen.


Welcome
Welcome to the QPC XSCAN32 Setup program. This program will install QPC XSCAN32 on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next >
Cancel

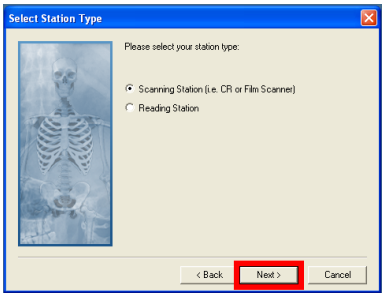
4. Click **Yes** to agree to the Software License Agreement.


Software License Agreement
Please read the following License Agreement. Press the PAGE DOWN key to see the rest of the agreement.
Software License Agreement
This is a legal agreement between you, the licensee, and iCRco, Inc. Please read this agreement carefully before opening the disk envelope. By opening the envelope, you accept the terms of this agreement. If you do not agree to the terms of this Agreement, promptly return the unopened, unused package and all accompanying items including written material, software disks, the "Software", protection device, etc.) at your expense to the place it was purchased from.
1. Copyright - The Software program is owned by iCRco, Inc and is protected by United States and international copyright laws and international trade provisions.
2. License - iCRco, Inc grants you the right to use the Software on a single user computer, or on a single workstation or terminal of a multi-user computer or local area
Do you accept all the terms of the preceding License Agreement? If you choose No, Setup will close. To install QPC XSCAN32, you must accept this agreement.
< Back
Yes
No

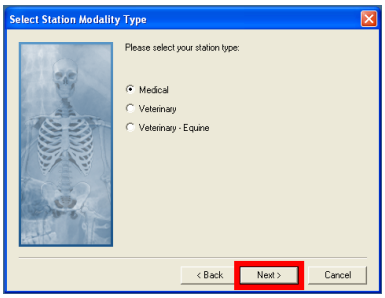
5. Make sure both *QPC XSCAN32 Software* and *Software Key Driver* boxes are checked, then click **Next**.


Select Components
Select the components you want to install, clear the components you do not want to install.
Components
QPC XSCAN32 Software 93600 K
Software Key Drivers 13472 K
Description
This component installs QPC XSCAN32 software.
Change...
Space Required: 126112 K
Space Available: 3640804 K
< Back
Next >
Cancel

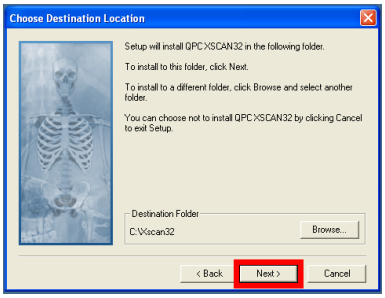
6. Select *Scanning Station* or *Reading Station* depend on the use, then click **Next** to continue.



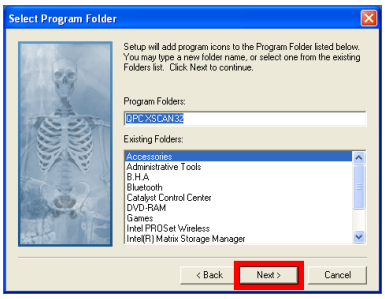
7. Select the appropriate modality, then click **Next** to continue.



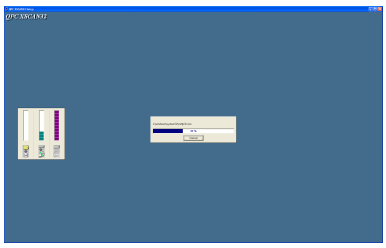
8. The Destination Folder should be set to `C:\Xscan32` then click **Next** to continue.


Choose Destination Location
Setup will install QPC XSCAN32 in the following folder.
To install to this folder, click Next.
To install to a different folder, click Browse and select another folder.
You can choose not to install QPC XSCAN32 by clicking Cancel to exit Setup.
Destination Folder
C:\Xscan32
Browse...
< Back
Next >
Cancel

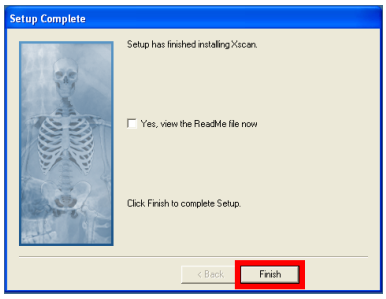
9. The Program Folder name should be set to *QPC XSCAN32*, then click **Next**.



10. QPC XSCAN32 will begin to install. Be patient while XSCAN32 installs.



11. Click **Finish** to complete the installation of QPC XSCAN32. The installer will exit.



6.3 Initializing the VERTX Driver

Note: This process will need to be repeated for each USB port on the laptop. There are 4 USB ports on each laptop.

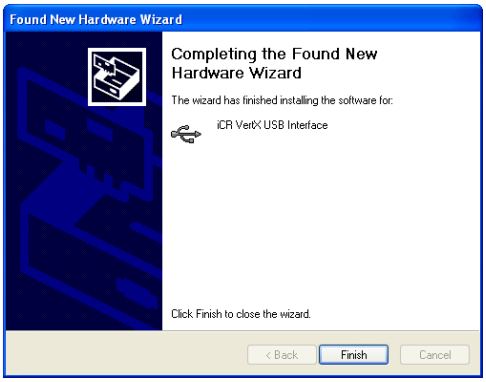
1. Make sure the VERTX unit is powered on and has the proper USB cable installed.
2. Plug the USB cable into the laptop.
3. The New Hardware Wizard dialog will pop up. Select the option *Install the software automatically*, then click **Next**.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
iCR VertX USB Interface
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

4. A driver signing warning will appear. Click **Continue Anyway**.

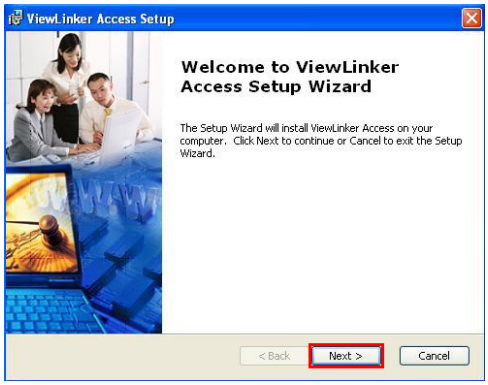
Hardware Installation
The software you are installing for this hardware:
iCR VertX USB Interface
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

5. The installation process is finished. Click **Finish** to finish the installation.

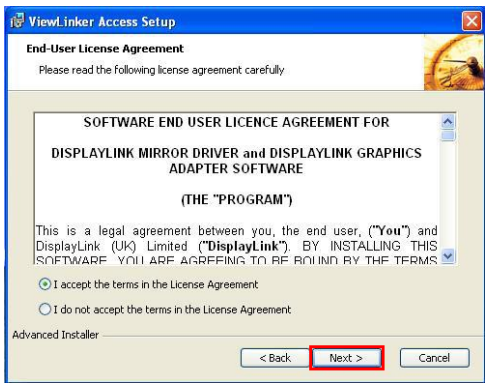

Found New Hardware Wizard
Completing the Found New Hardware Wizard
The wizard has finished installing the software for:
iCR VertX USB Interface
Click Finish to close the wizard.
< Back
Finish
Cancel

6.4 Installing Ampronix External Monitor Drivers

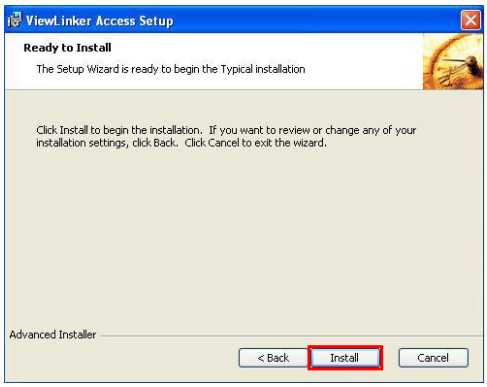
1. Insert the installation media into the computer.
2. Double click the **Setup.exe** file.
3. The Welcome screen will appear. Click **Next**.


ViewLinker Access Setup
Welcome to ViewLinker Access Setup Wizard
The Setup Wizard will install ViewLinker Access on your computer. Click Next to continue or Cancel to exit the Setup Wizard.
< Back
Next >
Cancel

4. At the license agreement screen, select the radio dialog box next to *I accept the terms in the License Agreement*, then click **Next**.


ViewLinker Access Setup
End-User License Agreement
Please read the following license agreement carefully
SOFTWARE END USER LICENCE AGREEMENT FOR
DISPLAYLINK MIRROR DRIVER and DISPLAYLINK GRAPHICS ADAPTER SOFTWARE
(THE "PROGRAM")
This is a legal agreement between you, the end user, ("You") and DisplayLink (UK) Limited ("DisplayLink"). BY INSTALLING THIS
I accept the terms in the License Agreement
I do not accept the terms in the License Agreement
Advanced Installer
< Back
Next >
Cancel

5. Click **Install** to begin the installation.

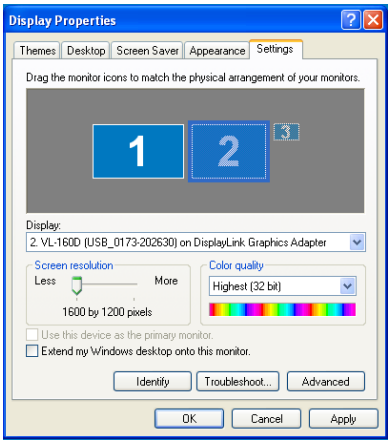

ViewLinker Access Setup
Ready to Install
The Setup Wizard is ready to begin the Typical installation
Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Advanced Installer
< Back
Install
Cancel

6. Click **Finish** to complete the installation.

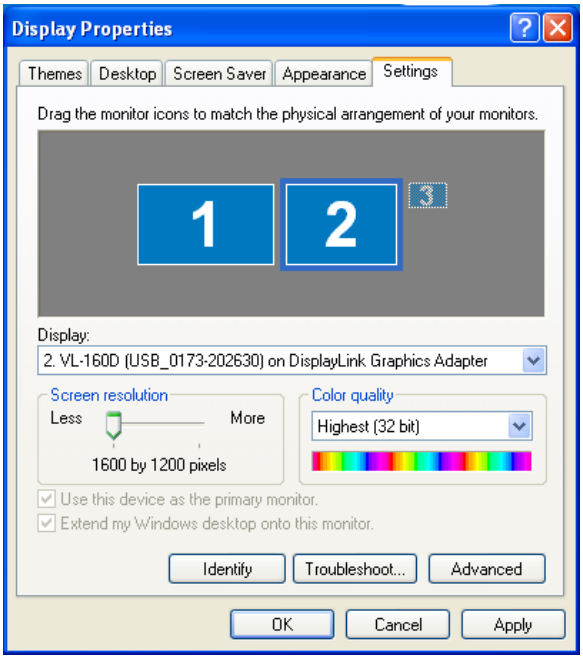
7. The user may need to reboot the computer for the installation to be completed.

6.5 Monitor Configuration

1. Ensure that the external monitor is powered on and is connected to the laptop via the USB cable.
2. Go to *Start* → *Control Panel* → *Display*.
3. In the *Display Properties*, click on the **Settings** tab.
4. In the Settings tab, select the display *VL-160D* – this is the external monitor.



5. Check the box, *Extend my Windows desktop onto this monitor*.
6. Check the box *Use this device as the primary monitor*.



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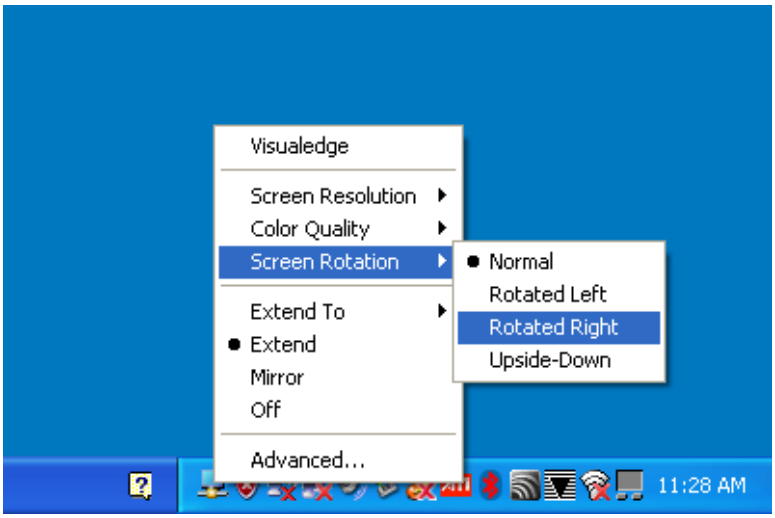
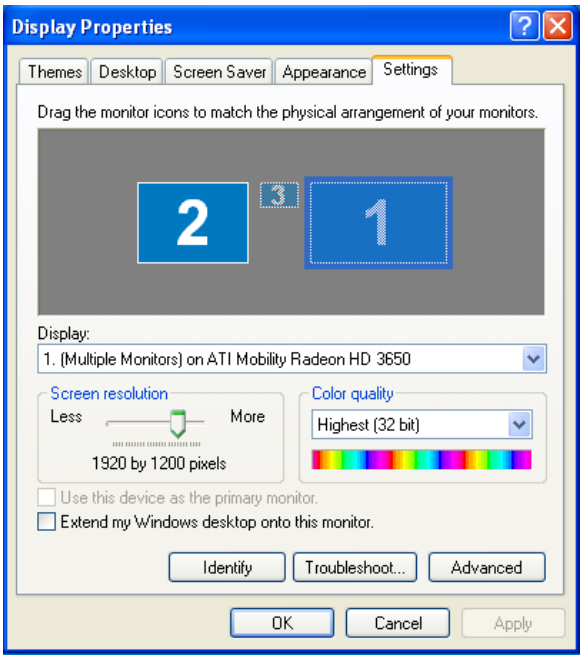
Property of *i*CRco, Inc.

7. Click Apply.
8. To rotate the external monitor to portrait mode, right click on the monitor icon in the system tray, then select *Screen Rotation*, then click *Rotate Right*.



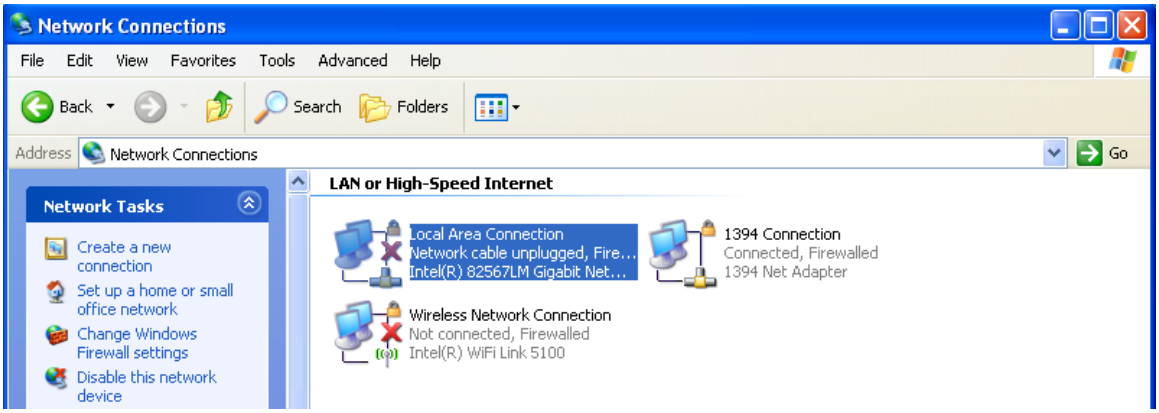
9. Select Monitor 1, then uncheck *Extend my Windows desktop onto this monitor*.



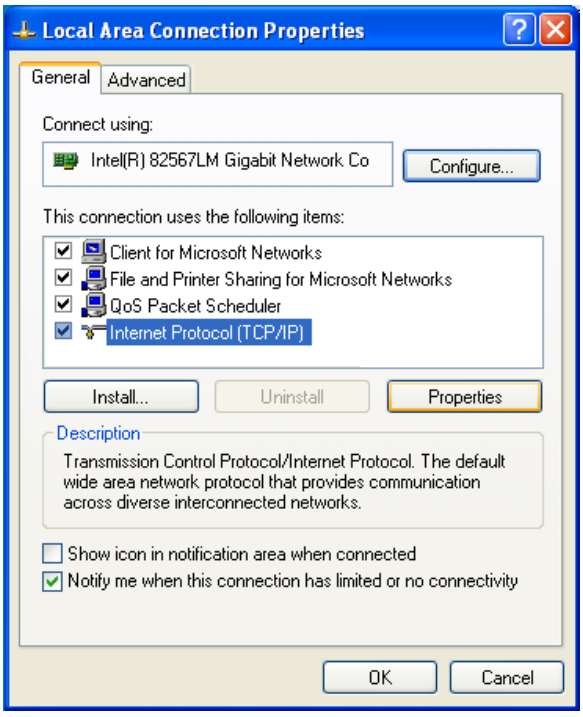
10. Click Apply.
11. This will turn off the laptop monitor, leaving the external monitor as the main, functioning screen.

6.6 Network Configuration

1. Go to *Start* → *Control Panel* → *Network Connections*, then double click **Local Area Connection**.



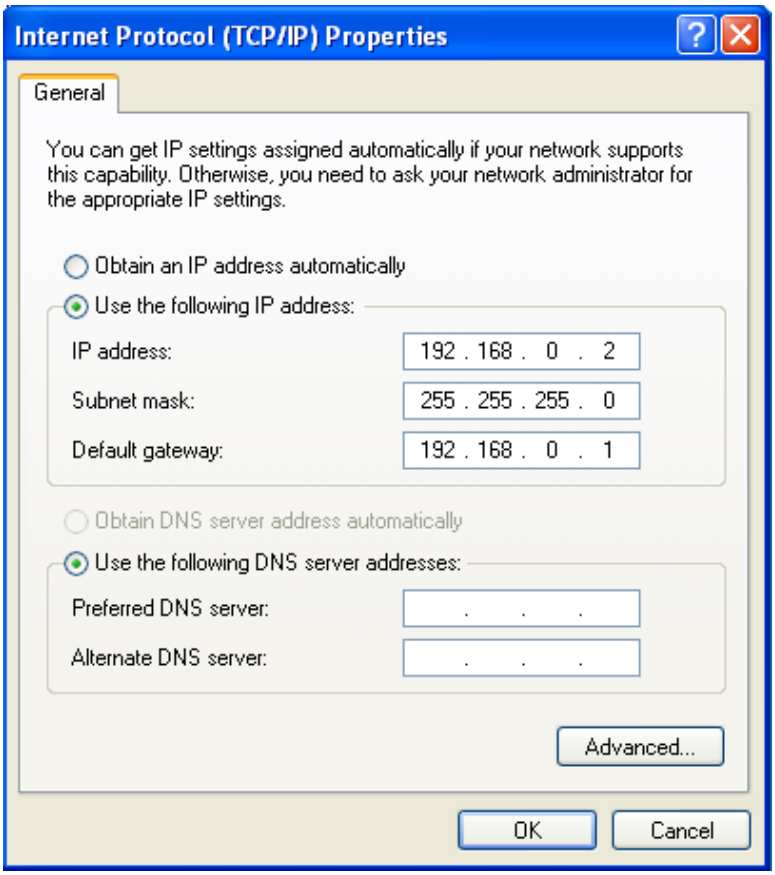
2. Select *Internet Protocol (TCP/IP)*, then click **Properties**.


Local Area Connection Properties
General Advanced
Connect using:
Intel(R) 82567LM Gigabit Network Co
Configure...
This connection uses the following items:
Client for Microsoft Networks
File and Printer Sharing for Microsoft Networks
QoS Packet Scheduler
Internet Protocol (TCP/IP)
Install... Uninstall Properties
Description
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.
Show icon in notification area when connected
Notify me when this connection has limited or no connectivity
OK Cancel

3. Select the check box *Use the following IP address*.

4. If the laptop is an Acquisition station, enter the following:
   IP Address: 192.168.0.1
   Subnet Mask: 255.255.255.0
   Default Gateway: 192.168.0.1

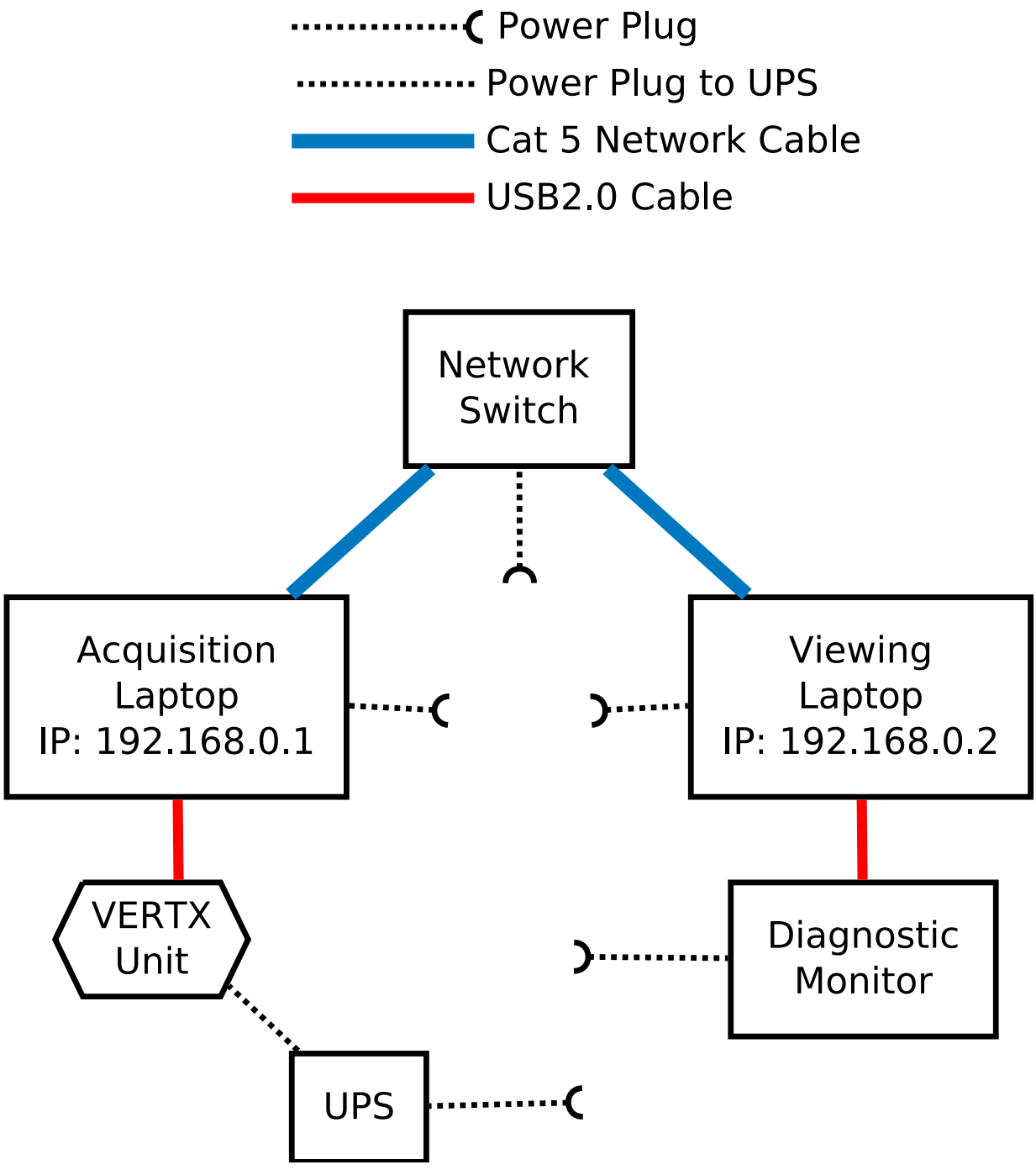
   If the laptop is a Viewing station, enter the following:
   IP Address: 192.168.0.2
   Subnet Mask: 255.255.255.0
   Default Gateway: 192.168.0.1


Internet Protocol (TCP/IP) Properties
General
You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Obtain an IP address automatically
Use the following IP address:
IP address:
192 . 168 . 0 . 2
Subnet mask:
255 . 255 . 255 . 0
Default gateway:
192 . 168 . 0 . 1
Obtain DNS server address automatically
Use the following DNS server addresses:
Preferred DNS server:
Alternate DNS server:
Advanced...
OK
Cancel

5. Click **OK**.

7. Hardware Installation

7.1 Hardware Setup Diagram



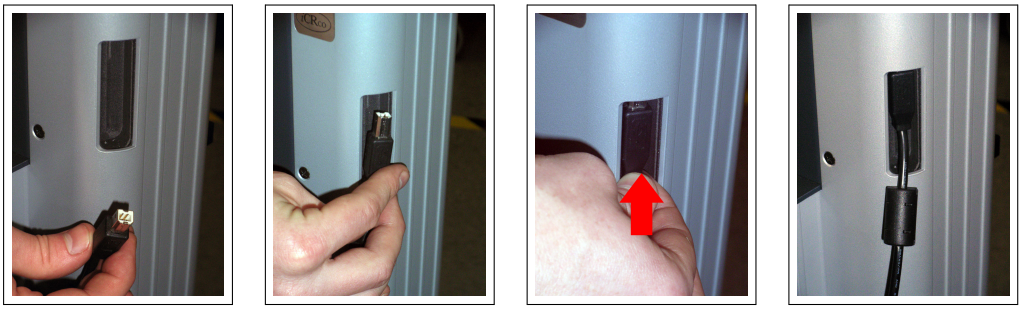
7.2 PC Specifications

The minimum requirements for the Acquisition computer are as follows:

Processor: Pentium D
RAM: 2 GB or more
OS: Windows XP
HDD: 250 GB or more

7.3 VERTX USB 2.0 Installation

The USB 2.0 port is located on the upper, right-hand side of the operator when facing the front of the VERTX unit. Plug a standard USB 2.0 cable into the VERTX USB port and then into the PC.



7.4 Power Switch Locations

The power switch for the VERTX unit is located on the front in the lower right hand side of the unit, shown here with the front cowling removed.

7.5 Installing AC Power Cord

1. Remove two (2) 8-32 x $1\frac{1}{2}$" flathead screws from the front power cowling.

2. Plug the other end of the power switch cord into the UPS battery back-up outlet.
3. Replace two (2) 8-32 x $1\frac{1}{2}$" flathead screws into the front power cowling.
4. Plug the male end of the power switch cord into the battery backup portion of the UPS.
5. Make sure the battery in the UPS is connected. If it is not connected, the UPS will beep intermittently.
6. Turn the VERTX unit switch to the on position.

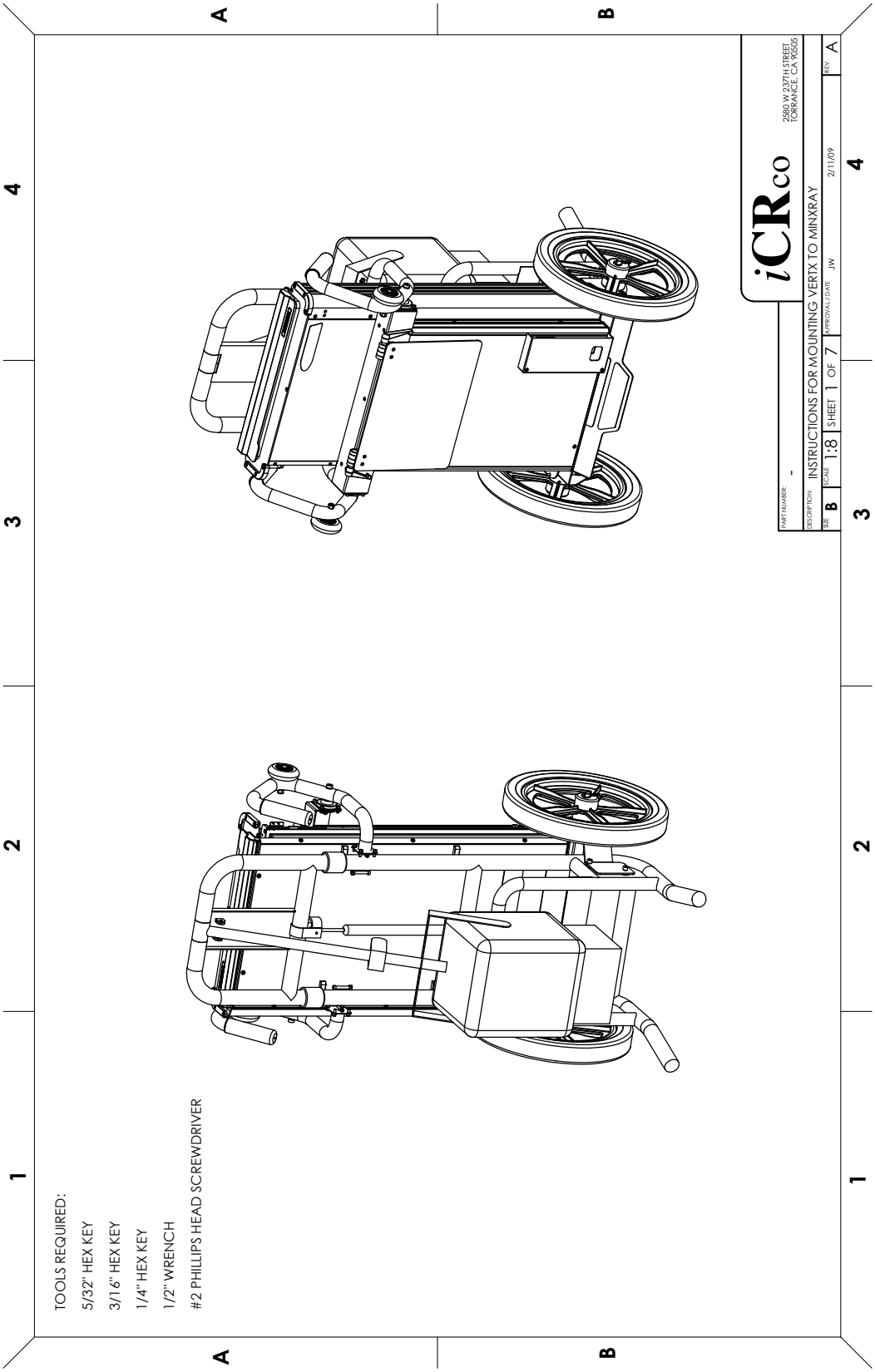
7.6 International Power Cable

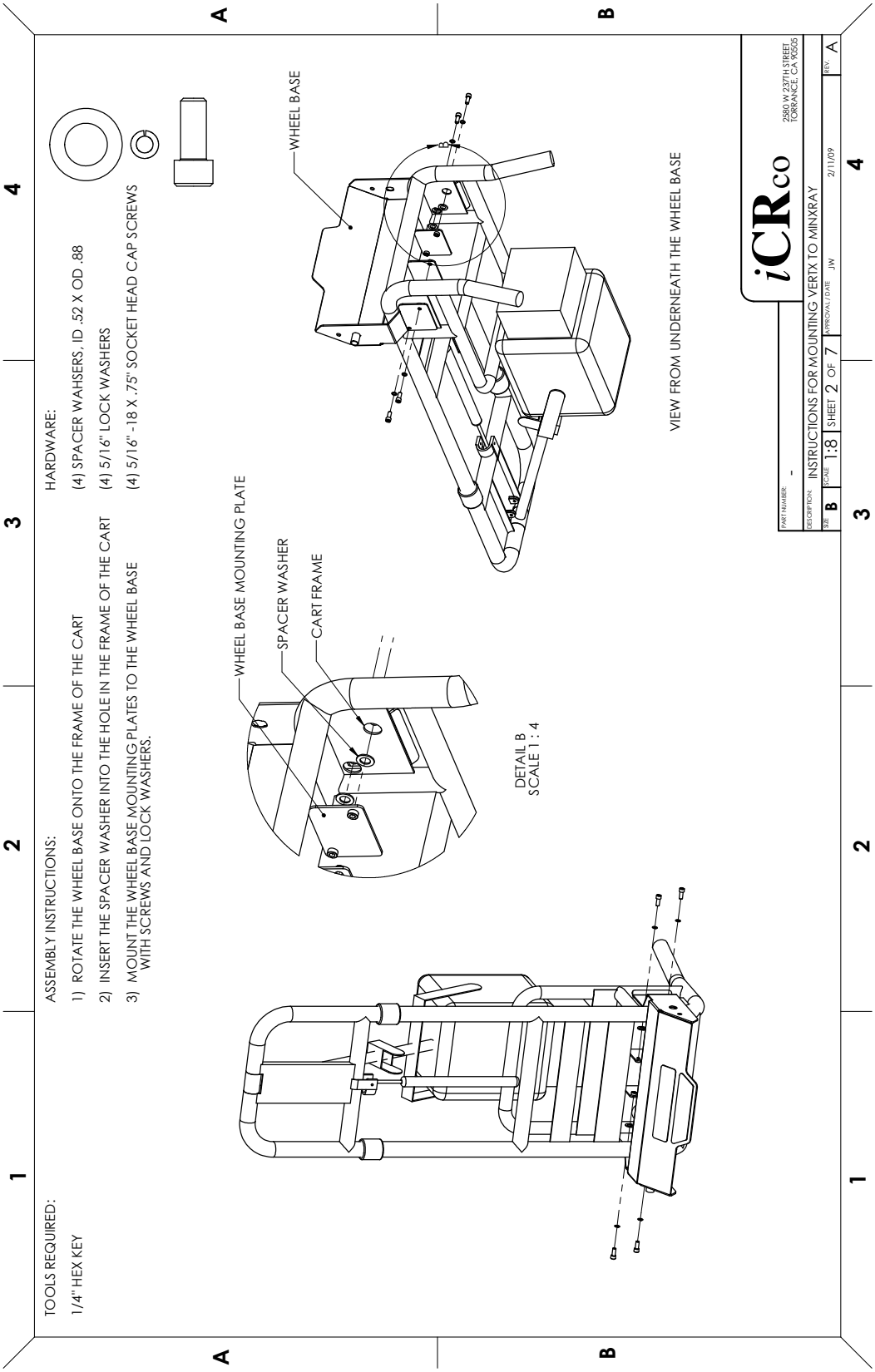
The VERTX unit utilizes an international IEC grade connector for the power cable. Systems are shipped with a standard NEMA 5-15 hospital grade cable. The cable needs to be changed depending on the male end, which varies from country to country.

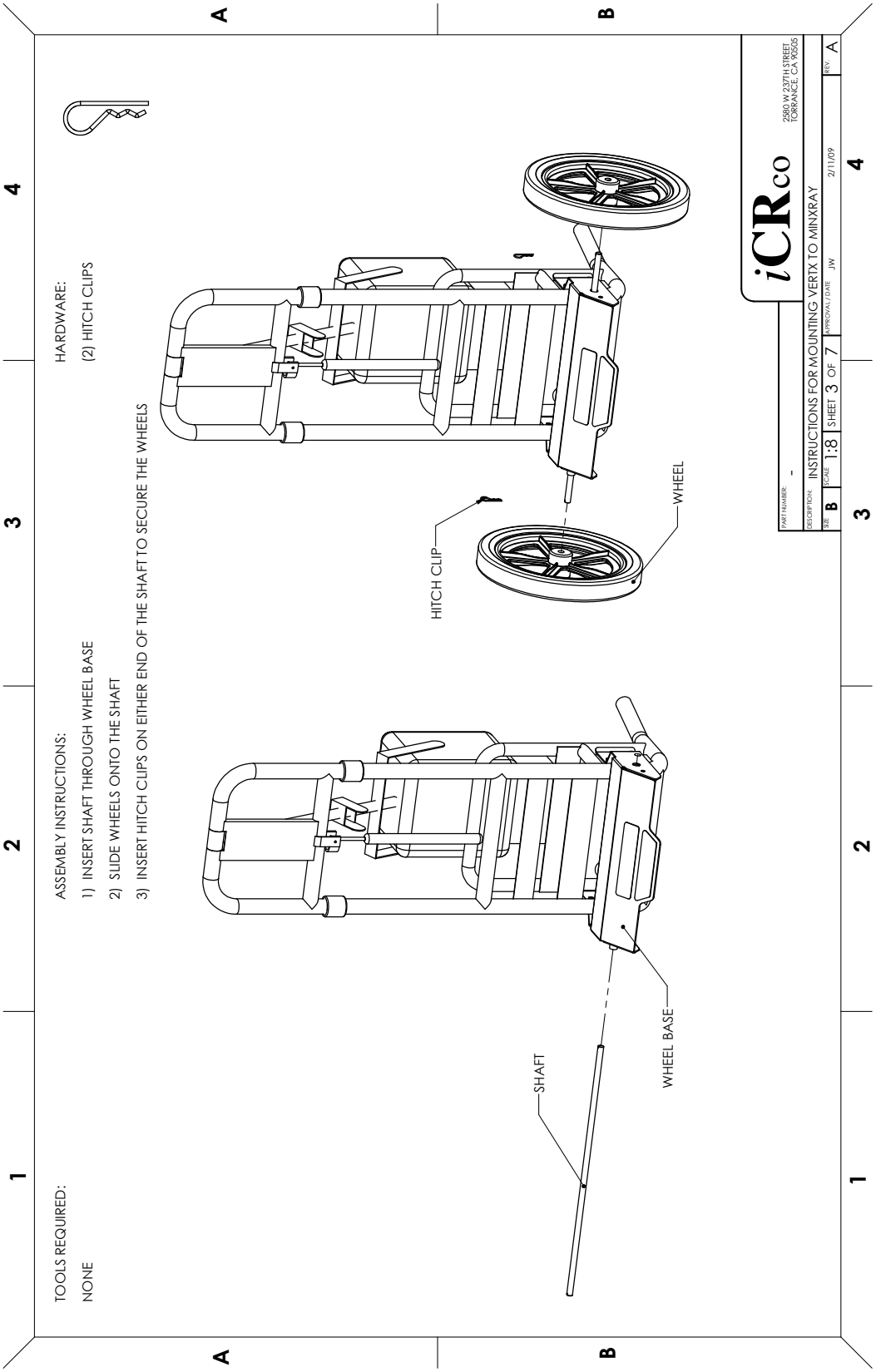
7.7 Power and Scan Lights

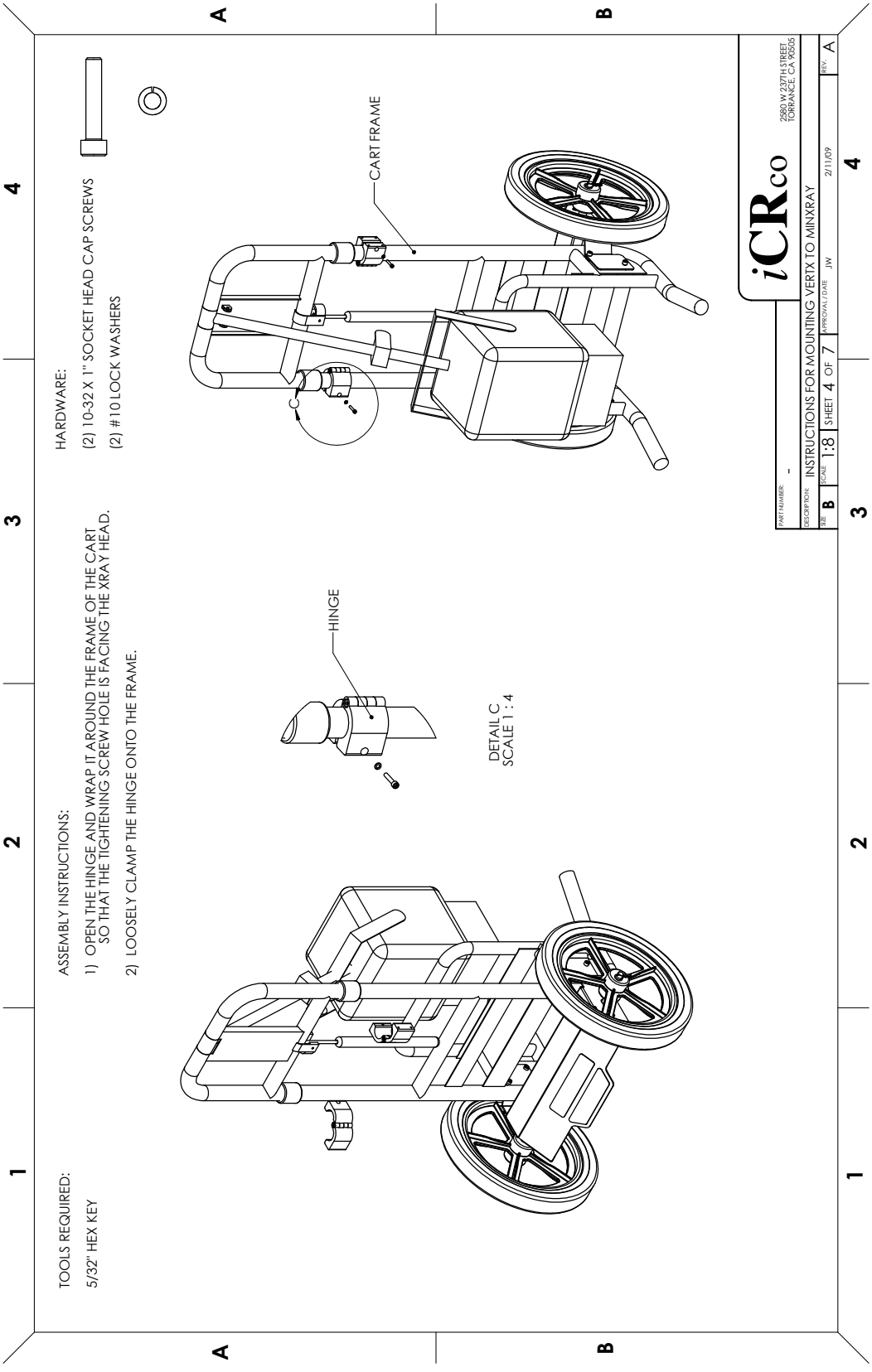
The power and scan lights are located in the front of the VERTX unit near the top right side. When the unit is powered on, the green light is illuminated. While the unit is scanning the yellow light will blink.

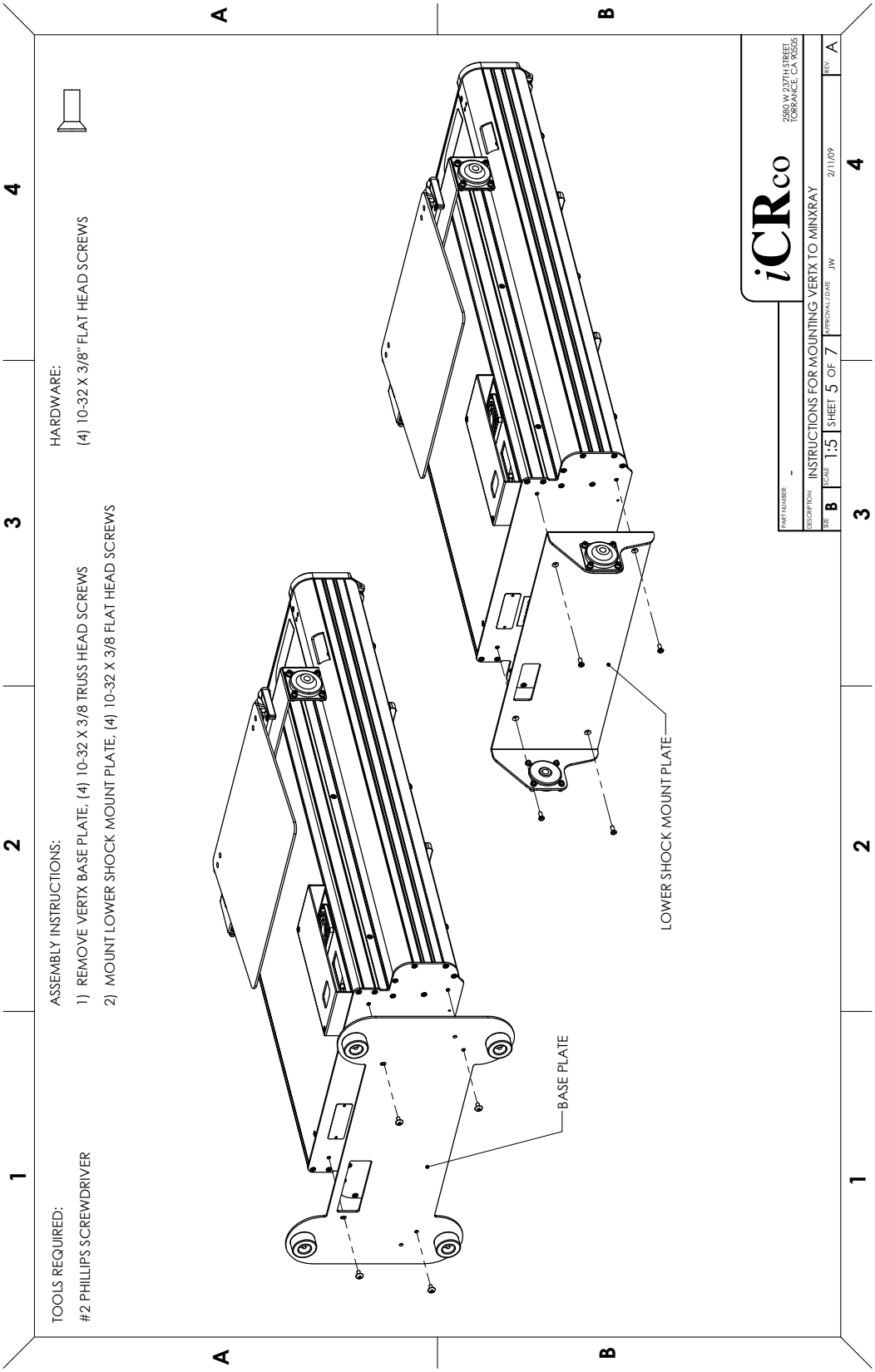
7.8 Cart Mounting Instructions

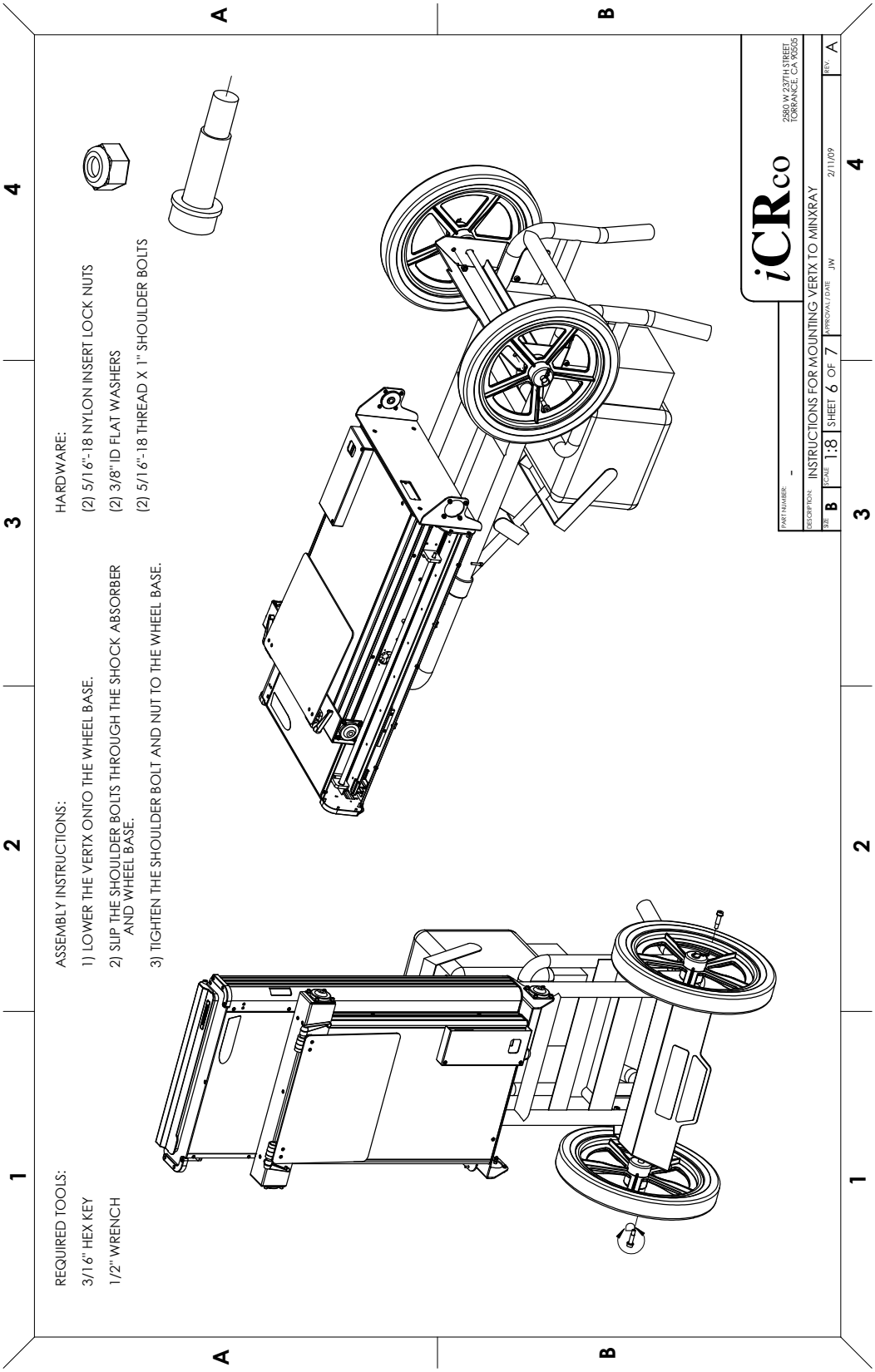

A
B
1
2
3
4
iCRco
2980 W 237TH STREET
TORRANCE, CA 90505
PART NUMBER: -
DESCRIPTION: INSTRUCTIONS FOR MOUNTING VERTX TO MINXRAY
SIZE B
SCALE 1:8
SHEET 1 OF 7
APPROVAL / DATE JW 2/11/09
REV A
TOOLS REQUIRED:
5/32" HEX KEY
3/16" HEX KEY
1/4" HEX KEY
1/2" WRENCH
#2 PHILLIPS HEAD SCREWDRIVER

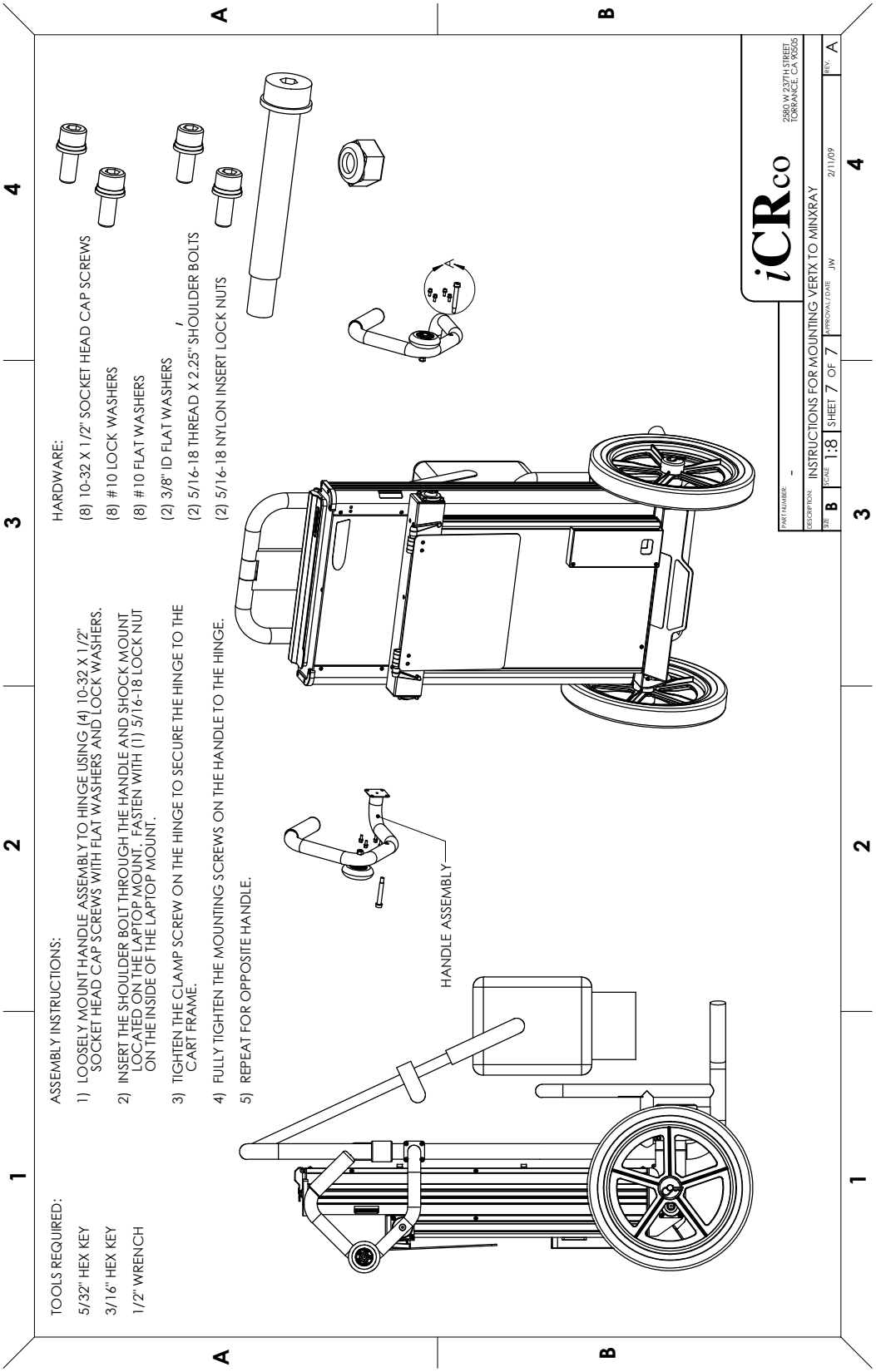

TOOLS REQUIRED:
1/4" HEX KEY
ASSEMBLY INSTRUCTIONS:
1) ROTATE THE WHEEL BASE ONTO THE FRAME OF THE CART
2) INSERT THE SPACER WASHER INTO THE HOLE IN THE FRAME OF THE CART
3) MOUNT THE WHEEL BASE MOUNTING PLATES TO THE WHEEL BASE WITH SCREWS AND LOCK WASHERS.
HARDWARE:
(4) SPACER WAHSERS, ID .52 X OD .88
(4) 5/16" LOCK WASHERS
(4) 5/16" -18 X .75" SOCKET HEAD CAP SCREWS
WHEEL BASE
WHEEL BASE MOUNTING PLATE
SPACER WASHER
CART FRAME
DETAIL B
SCALE 1 : 4
VIEW FROM UNDERNEATH THE WHEEL BASE
iCRco
2380 W 237TH STREET
TORRANCE, CA 90505
PART NUMBER: -
DESCRIPTION: INSTRUCTIONS FOR MOUNTING VERTX TO MINXRAY
SIZE B
SCALE 1:8
SHEET 2 OF 7
APPROVAL / DATE JW 2/11/09
REV A


TOOLS REQUIRED:
NONE
ASSEMBLY INSTRUCTIONS:
1) INSERT SHAFT THROUGH WHEEL BASE
2) SLIDE WHEELS ONTO THE SHAFT
3) INSERT HITCH CLIPS ON EITHER END OF THE SHAFT TO SECURE THE WHEELS
HARDWARE:
(2) HITCH CLIPS
HITCH CLIP
WHEEL
SHAFT
WHEEL BASE
iCRco
2380 W 237TH STREET
TORRANCE, CA 90505
PART NUMBER: -
DESCRIPTION: INSTRUCTIONS FOR MOUNTING VERTX TO MINXRAY
SIZE B
SCALE 1:8
SHEET 3 OF 7
APPROVAL / DATE JW 2/11/09
REV A


TOOLS REQUIRED:
5/32" HEX KEY
ASSEMBLY INSTRUCTIONS:
1) OPEN THE HINGE AND WRAP IT AROUND THE FRAME OF THE CART SO THAT THE TIGHTENING SCREW HOLE IS FACING THE XRAY HEAD.
2) LOOSELY CLAMP THE HINGE ONTO THE FRAME.
HARDWARE:
(2) 10-32 X 1" SOCKET HEAD CAP SCREWS
(2) #10 LOCK WASHERS
CART FRAME
HINGE
DETAIL C
SCALE 1 : 4
iCRco
2380 W 237TH STREET
TORRANCE, CA 90505
PART NUMBER: -
DESCRIPTION: INSTRUCTIONS FOR MOUNTING VERTX TO MINXRAY
SIZE B
SCALE 1:8
SHEET 4 OF 7
APPROVAL / DATE JW 2/11/09
REV A


TOOLS REQUIRED:
#2 PHILLIPS SCREWDRIVER
ASSEMBLY INSTRUCTIONS:
1) REMOVE VERTX BASE PLATE, (4) 10-32 X 3/8 TRUSS HEAD SCREWS
2) MOUNT LOWER SHOCK MOUNT PLATE, (4) 10-32 X 3/8 FLAT HEAD SCREWS
HARDWARE:
(4) 10-32 X 3/8" FLAT HEAD SCREWS
BASE PLATE
LOWER SHOCK MOUNT PLATE
iCRco
2380 W 237TH STREET
TORRANCE, CA 90505
PART NUMBER: -
DESCRIPTION: INSTRUCTIONS FOR MOUNTING VERTX TO MINIXRAY
SIZE B
SCALE 1:5
SHEET 5 OF 7
APPROVAL / DATE JW 2/11/09
REV A


REQUIRED TOOLS:
3/16" HEX KEY
1/2" WRENCH
ASSEMBLY INSTRUCTIONS:
1) LOWER THE VERTX ONTO THE WHEEL BASE.
2) SLIP THE SHOULDER BOLTS THROUGH THE SHOCK ABSORBER AND WHEEL BASE.
3) TIGHTEN THE SHOULDER BOLT AND NUT TO THE WHEEL BASE.
HARDWARE:
(2) 5/16"-18 NYLON INSERT LOCK NUTS
(2) 3/8" ID FLAT WASHERS
(2) 5/16"-18 THREAD X 1" SHOULDER BOLTS
iCRco
2580 W 237TH STREET
TORRANCE, CA 90505
PART NUMBER: -
DESCRIPTION: INSTRUCTIONS FOR MOUNTING VERTX TO MINXRAY
SIZE B
SCALE 1:8
SHEET 6 OF 7
APPROVAL / DATE JW 2/11/09
REV A

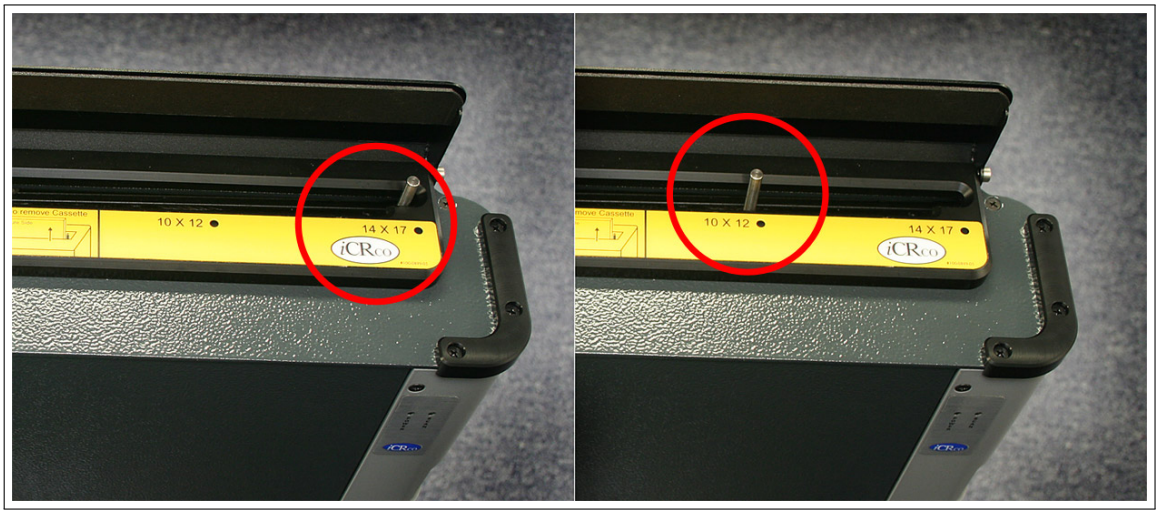

TOOLS REQUIRED:
5/32" HEX KEY
3/16" HEX KEY
1/2" WRENCH
ASSEMBLY INSTRUCTIONS:
1) LOOSELY MOUNT HANDLE ASSEMBLY TO HINGE USING (4) 10-32 X 1/2" SOCKET HEAD CAP SCREWS WITH FLAT WASHERS AND LOCK WASHERS.
2) INSERT THE SHOULDER BOLT THROUGH THE HANDLE AND SHOCK MOUNT LOCATED ON THE LAPTOP MOUNT. FASTEN WITH (1) 5/16-18 LOCK NUT ON THE INSIDE OF THE LAPTOP MOUNT.
3) TIGHTEN THE CLAMP SCREW ON THE HINGE TO SECURE THE HINGE TO THE CART FRAME.
4) FULLY TIGHTEN THE MOUNTING SCREWS ON THE HANDLE TO THE HINGE.
5) REPEAT FOR OPPOSITE HANDLE.
HARDWARE:
(8) 10-32 X 1/2" SOCKET HEAD CAP SCREWS
(8) #10 LOCK WASHERS
(8) #10 FLAT WASHERS
(2) 3/8" ID FLAT WASHERS
(2) 5/16-18 THREAD X 2.25" SHOULDER BOLTS
(2) 5/16-18 NYLON INSERT LOCK NUTS
HANDLE ASSEMBLY
iCRco
2380 W 237TH STREET
TORRANCE, CA 90505
PART NUMBER: -
DESCRIPTION: INSTRUCTIONS FOR MOUNTING VERTX TO MINXRAY
SIZE B
SCALE 1:8
SHEET 7 OF 7
APPROVAL / DATE JW 2/11/09
REV A
A
B
1
2
3
4

8. Acquiring an Image

⚠ WARNING: This equipment employs a laser. Avoid the laser beam. Direct eye exposure to laser light must be avoided. Avoid looking down the cassette entry slot.

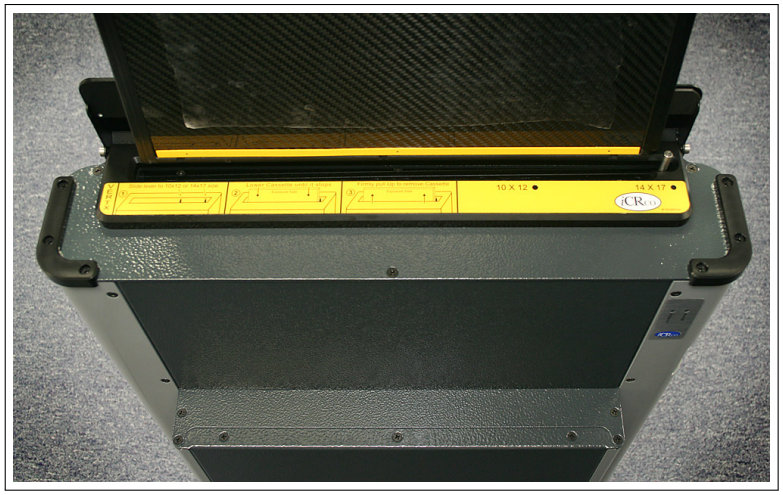
Note: The steps in this section represent a typical CR workflow. Every workflow varies in process.

1. Open the dust cover that covers the entry slot.
2. Choose the cassette size (10x12″ or 14x17″) by moving the metal rod on the right side of the scan slot to the appropriate position.



Position the metal rod towards the inside of the VERTX for a 10x12″ cassette. Position towards the outside of the VERTX for a 14x17″ cassette.

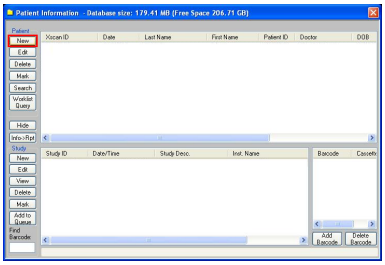
3. Load the cassette into the VERTX. The black, carbon fiber side of the cassette faces towards the front of the VERTX unit.



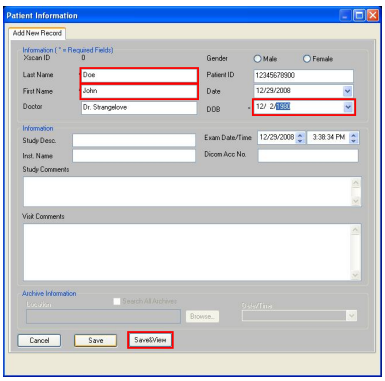
⚠ CAUTION: Do not use excessive force when loading the cassette! The cassette will not fit if the orientation is incorrect.

4. Open QPC XSCAN32.

5. Create or edit patient profile. To do this, click **New** or **Edit**, respectively.

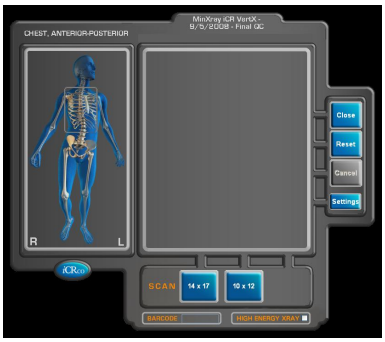


6. If creating a new patient, enter the relevant patient info, or if editing a patient, change the information accordingly, then click **Save and View.**

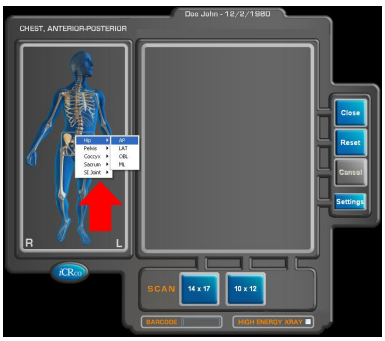


7. Click on **Scan** to bring up the Quality Processing Center Scan dialog. (if it is a patient with no images the scan dialog will automatically appear).

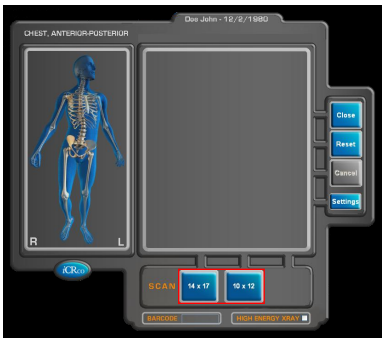
8. The *i*CR Quality Processing Center dialog will appear.



9. Select the anatomy by mousing over the skeleton on the left hand side of the Quality Processing Center dialog.



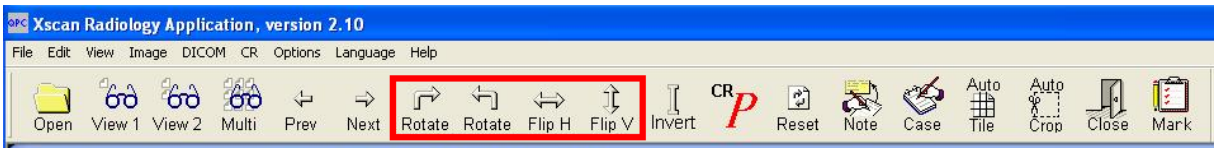
10. To begin scanning, select the cassette size by clicking the correct button (i.e. 14x17 in, 10x12 in).



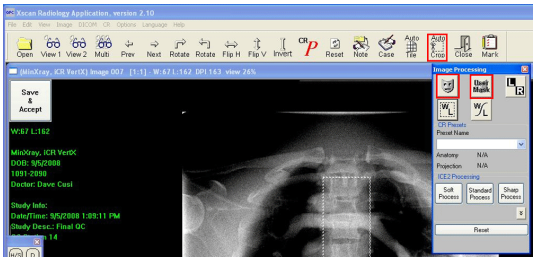
11. The preview window will display the image as it is scanning. Once it has finished scanning it will automatically import the image into QPC XSCAN32.

12. Open the scanned image by double clicking on the thumbnail.

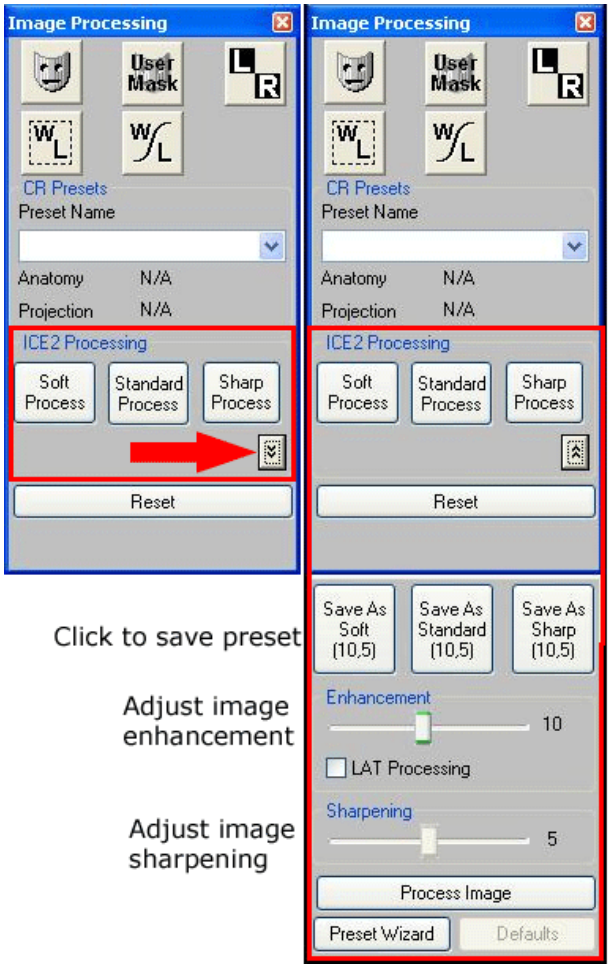
13. Rotate/Flip to correct orientation using the Rotate and Flip buttons in the main tool bar.



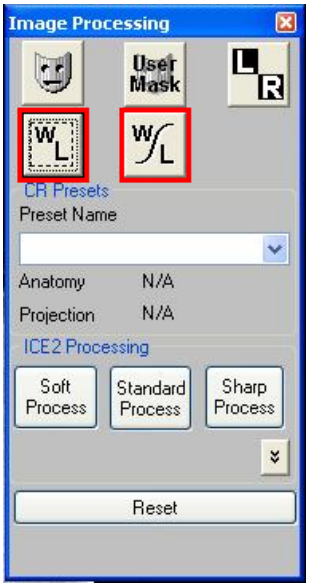
14. Remove any collimation by using the Auto Crop(located in the main toolbar), Mask, or User Mask (located in the Image Processing dialog) functions.



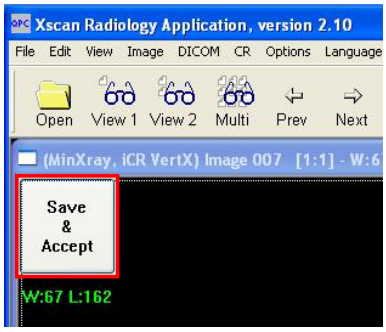
15. Process using ICE2 (located in the Image Processing dialog).



16. Window/Level(W/L) the image using the Window/Level or Smart Box tools.



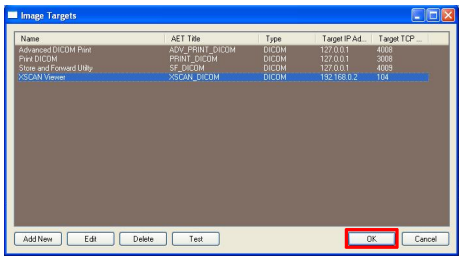
17. Accept and Save the image to save the processing and W/L settings by clicking the **Save and Accept** button in the upper left hand corner of the image.


Xscan Radiology Application, version 2.10
File Edit View Image DICOM CR Options Language
Open View 1 View 2 Multi Prev Next
(MinXray, iCR VertX) Image 007 [1:1] - W:6
Save & Accept
W:67 L:162

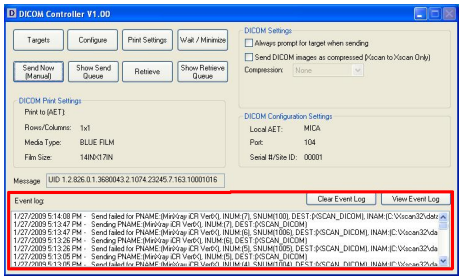
18. Return to the *Patient Information* window. Select the patient(s) to send to a PACS or viewing station. If you wish to send more than one patient, hold the Ctrl key down and left mouse click to select multiple patients.

19. After selecting the patient(s), click the **DICOM Send** button.

20. The *DICOM Targets* window will appear, select the desired target, then click **OK**



21. The results of the DICOM Send will appear in the DICOM Controller window's Event log.



9. QPC XSCAN32 Software Functions

9.1 Creating/Editing Patients

1. Open the QPC XScan32 software and click the New button on the Patient Information dialog under Patient. Alternatively, if the patient is already in the patient list then select the patient and click the Edit button on the Patient information dialog.
2. Enter the patient details into the appropriate fields on the dialog. The user also needs to enter the exam information for the patient. Note: Last Name, First Name, Date and DOB are required fields. The user can also make Patient ID a required field by clicking on the *Options menu* → *Preferences* → *Defaults* → *Data Entry – Required Fields* section
3. Click the Save or Save and View button after the patient details have been entered. Note: The Save and View button will create/edit the patient and open the exam immediately for viewing or scanning of images.
4. To create an additional exam for the patient return to the Patient dialog and click the New button under Exam. Enter in the exam information.
5. Click the Save or Save and View button when you have completed entering the exam details.

9.2 Default Mouse Functions for Image Manipulation

Windows / Level Images

The middle mouse button is used to window / level images. Hold down the middle mouse button (holding the CTRL key and right mouse clicking will also window/level) and move the mouse vertically to adjust the brightness of the image or move the mouse horizontally to adjust the contrast of the image.

Magnify (Zooming) Images

The right mouse button is used to magnify images. Hold down the right mouse button and move the mouse up and down to magnify and reduce the size of the image. (Alternatively the user can hold down the middle mouse button and move the mouse up and down to magnify.) To magnify an area of interest in the image, simultaneously hold down the Shift key and the Left mouse button and move it over the area of interest.

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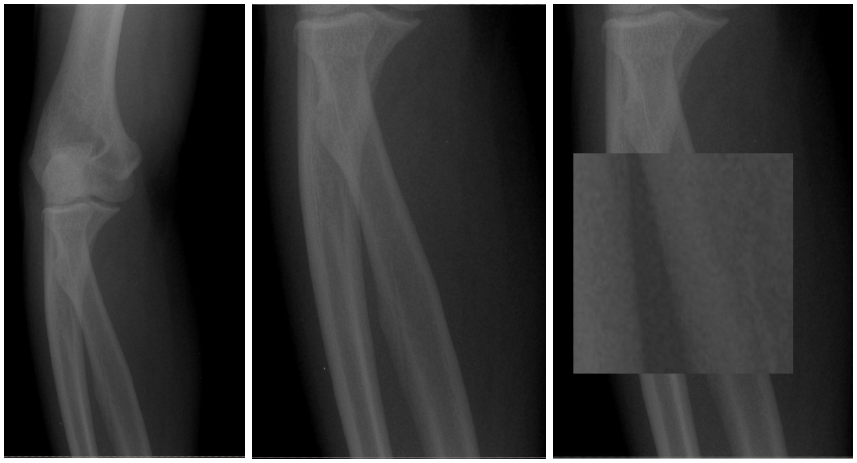


Similarly, on a laptop the user may right click and drag along the touch pad interface to zoom.

Panning (Moving) Images

Hold down the Left mouse button and move the mouse around the screen. This is useful when the image is magnified. The left mouse button is used to pan images. To pan through the image faster, simultaneously hold down the Ctrl key and the Left mouse button.

9.3 Image Processing Dialog Box

Window / Level

Hold the middle mouse scroll button(holding down the CTRL key and right mouse clicking will also window/level) down and move the mouse up and down to adjust level and from side to side to adjust window.

The middle scroll button is used to window and level images.

To window and level through more gray values at a tie, hold down the Ctrl key and use the Middle Scroll button. This will perform a faster window and level on images with a large histogram (i.e. CR and DR images).
To window and level through less gray values at a time (i.e. single step through window and level values) hold down the Shift key and use the Middle Scroll button. This will perform a slower window and level on images with a smaller histogram (i.e. CT and MR images).

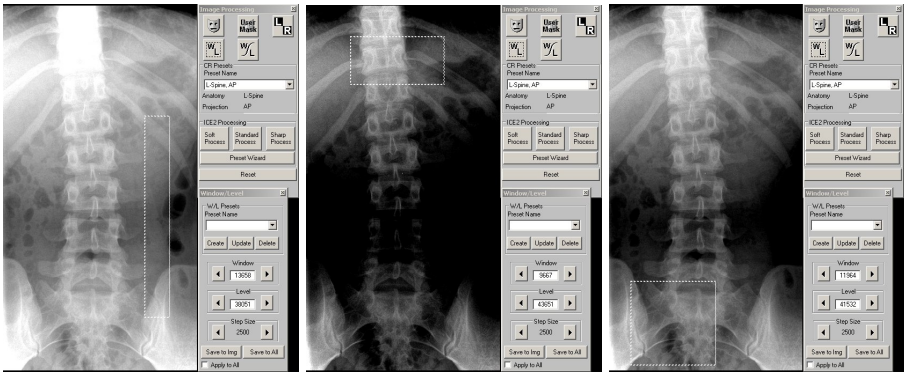
Smart Box Window/Level

The Smart Box feature can be activated from the processing toolbar by clicking the icon shown in the figure. A box enclosed in dashed lines will appear on the image. This is the Smart Box's representation of the Auto Window/Function feature.

To resize the smart box hold down the left mouse button on the border of the smart box and move the mouse forwards and backwards (or up and down if adjusting the bottom edge).

To resize both edges of the smart box at the same time hold down the Ctrl key and Left mouse button on any of the four corners of the smart box and move the mouse.

To move the smart box around the image hold down the left mouse button anywhere inside the smart box and drag the mouse around the image.



The Smart Box's size and position can be adjusted to yield different results. This allows the user fast and efficient image processing methods. Examples of these features are shown above.

Left and Right CR Markers

1. Open an image for viewing.

2. Select the Left/Right Markers button to apply a Left or Right marker to the image.
3. Select either the Left or Right marker. When the user clicks on the Left/Right Marker button the Left marker icon will appear. If the user clicks the Left/Right Marker button again the Right marker icon will appear. Clicking again will toggle back to the Left marker.
4. Move the mouse onto the part of the image where the marker needs to appear. When the user moves the mouse over the image a Left or Right marker icon will appear in place of the mouse.
5. Click on the image to place the icon.
6. To remove the marker click on the Left/Right Marker button again.

CR Cropping

1. Open the image that needs to be cropped.
2. Select the Crop button from the main toolbar.
3. While holding down the left mouse button select the region that needs cropping.
4. When the mouse is released, the area to be cropped will be surrounded by a red line. A message box will appear asking to confirm the selected region.
5. To confirm the region click OK.
6. The new image will be created in the same study and will open automatically for viewing.

Cropping Example:

Before

After

CR Masking

1. Open an image for viewing.
2. Click the User Mask button.
3. To remove the collimation mask select the Mask button again.

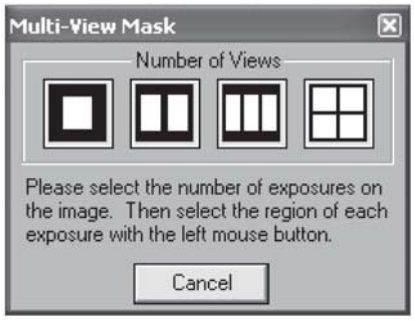
CR Masking Example

Before User Masking

After User Masking

CR User Masking

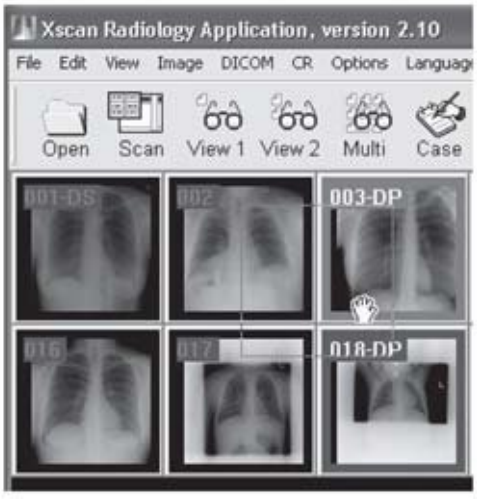
1. Open an image for viewing.
2. Click the User Mask button.
3. Select the number of views from the Multi-View Mask dialog, (i.e. if there are two hand exposures on one image select the two-view button.


Multi-View Mask
Number of Views
Please select the number of exposures on the image. Then select the region of each exposure with the left mouse button.
Cancel

4. Hold the left mouse button down on the start region and move the mouse to the end of the crop region.
5. Repeat step 4 for each exposure. After the user has completed selecting the number of exposures, the masks will appear on the image.
6. To remove the user mask select the Mask button.

Moving Icon Thumbnails

1. Open a patient study for viewing.
2. Hold down the Ctrl key while clicking the left mouse button on the image that needs to be moved. The arrow icon will change to a hand icon. The icon highlighted in red shows the location where the image will be dropped.
3. To drop the icon, simply release the left mouse button.



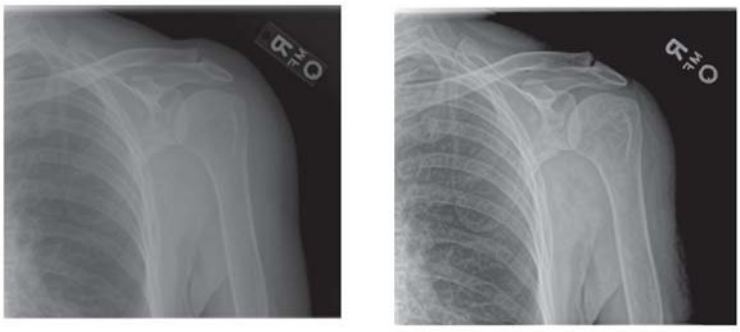
Note: If the moving icon is highlighted, this indicates that it will return to its original position. If an icon is dragged forwards in position (i.e. the image number of the

highlighted icon is higher than the moving icon) then all icons between its original position and its new position will move backwards and each image number decreases by one. If an icon is dragged backwards in position (i.e. the image number of the highlighted icon is less than the moving icon) then all icons between its original position and its new position will move forward and each image number increases by one. If no icons are highlighted when dragging, then the image will be returned to its original position.

CR Processing

1. Open an image for viewing.
2. Select an anatomy from the CR Preset box.
3. Click the Process button to begin the processing.
4. You can press the Reset button to restore the original image data set. Note: the user can also press the Process button again and the original data set will be automatically restored and processed again.
5. To optimize processing strength change Gain and Frequency Enhancement as needed. Note: The user can update the CR preset by selecting the Update button, which will ensure that these processing strengths will be used each time with the currently selected anatomy.

CR Processing Example:



Original Image Processed Image

About Advanced ICE-2 Processing

ICE-2 is a state-of-the-art image processing package that automatically enhances and optimizes the diagnostic quality of digital radiographic images. ICE-2 enables the user more flexibility through the “soft” and “sharp” processing options. The “soft” option produces an image with less enhancement thereby making the image more “film-like.” The “sharp” button applies more enhancement to the image.

ICE2 Example: Lateral Lumber Spine

Conventional Processing ICE-2 Processing

Clicking the drop down menu button located below the "sharp" option gives the user the ability to refine the image further. After the user clicks on the drop down menu an interface appears showing two sliders. The first slider enhances edges and contrast as the slider is moved to the right. The second slider adjusts image smoothness. Adjust each slider until the desired result is achieved. Click on the "Save As" button to Save the settings for Soft, Standard or Sharp processing.

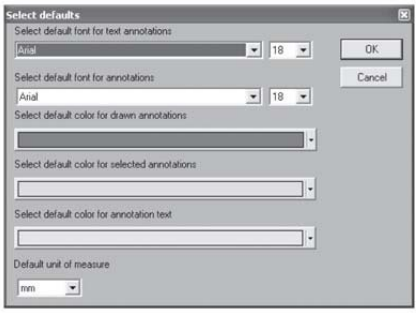
9.4 Annotations

Hide / Show Annotations

Selecting the Hide / Show Annotations button will toggle the visibility of the Annotations tool pallet.

Annotation Defaults

Used to change the default font name, font size and colors.
Select the Defaults D button on the annotations toolbar.



Embed Annotations in Image

Clicking on the Embed Annotations in Image button will save all the annotations into the image, enabling the user to DICOM send images with annotations. If the annotations are not embedded, they will not be sent with the image when doing a DICOM send.

Line Annotations

Creates a straight line on the image.

1. Select the Line button from the annotations toolbar.
2. Left mouse click on the area of the image to set the first endpoint.
3. Move the mouse to where the second endpoint will be.
4. Left mouse click on the are of the image to set the second endpoint.

Extended Line Annotation

Creates a straight line that passes through the image.

1. Select the Extended Line from the annotations toolbar.
2. Left mouse click on the area of the image to set the first endpoint.
   Note: that the line will be extended through the entire image.
3. Move the mouse to where the second endpoint will be.
4. Left mouse click on the area of the image to set the second endpoint.

Arrow Annotation

Creates an arrow on the image, which will point to a region of interest.

1. Select the Arrow button from the annotations toolbar.
2. Left mouse click on the area of the image to set the end of the arrow.
3. Move the mouse to where the arrow should point.
4. Left mouse click to set the second endpoint of the arrow head.

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Cross Hair Annotation

Creates a cross hair on the image.

1. Select the Cross Hair button from the annotations toolbar.
2. Left mouse click on the area of the image to set the start point of the cross hair.
3. Move the mouse to where the second endpoint will be.
4. Left mouse click on the area of the image to set the cross hair.

Free Hand Annotation

Allows user to draw freehand on the image.

1. Select the Free hand button from the annotations toolbar.
2. Hold down the left mouse button on the part of the image that is desired to start drawing then drag the mouse.
3. Continue to hold the left mouse button and draw as necessary .
4. Release the left mouse button to end the freehand drawing.

Ellipse Annotation

Creates an unfilled ellipse on the image. This feature is used to show a region of interest on the image.

1. Select the Ellipse button from the annotations toolbar.
2. Left mouse click on the area of the image to start the ellipse.
3. Move the mouse to where the ellipse will end.
4. Left mouse click to set the ellipse in place.

Rectangle Annotation

Creates an unfilled box on the image. Used to show a region of interest on the image.

1. Select the Box button from the annotations toolbar.
2. Left mouse click on the area of the image to start the box.
3. Move the mouse to where the box will end.
4. Left mouse click to set the box in place.

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Text Annotation

Creates a text annotation on the image.

1. Select the Text button from the annotations toolbar.
2. Left mouse click on the area of the image to set the upper left corner of the text box.
3. Move the mouse to where the text box will end.
4. Left mouse click to set the size of the text box.
5. The text box will become white with a flashing cursor. Type text.
6. Click anywhere on the image to end the text box.

Measurement Annotation

Used to measure the distance of a straight line on the image. This can be in inches, cm, mm and pixels.

1. Select the Measurement button from the annotations toolbar.
2. Left mouse click on the image to set the first endpoint of the measurement.
3. Move the mouse to where the endpoint of the measurement will be.
4. Left mouse click to set the endpoint of the measurement. The measurement will appear below the line.
5. To place the text in this default position left mouse click on the same point again. To move the text out of the way, move the mouse to the desired location and left mouse click to set the placement of the text.

Calibration

The calibration tool compensates for image magnification. It will allow the user to take an object of known length (a coin, ruler, etc that is not susceptible to measurement distortion), draw a linear measurement, and assign a length value such that measurements made with other tools will be accurate in the unit of measurement.

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Angle Measurement Annotation

Used to draw an angle on the image.

1. Select the Angle Measurement button on the annotations toolbar.
2. Left mouse click on the image to set the vertex (center point) of the angle.
3. Move the mouse to where the endpoint of the first vector will be.
4. Left mouse click to set the endpoint of the first vector.
5. Move the mouse to where the endpoint of the second vector will be.
6. Left mouse click to set the endpoint of the second vector. The angle measurement will appear.
7. To place the angle text in this default position left mouse click on the same point again. To move the angle text out of the way or to change angles, move the mouse to the desired location and left mouse click to set the placement.

Cobb Angle Annotation

Used to draw a cobb angle on the image.

1. Select the Cobb Angle button on the annotations toolbar.
2. Left mouse click on the area of the image to set the first endpoint of the first line.
3. Move the mouse to where the second endpoint of the first line will be.
4. Left mouse click on the area of the image to set the second endpoint of the first line.
5. Left mouse click on the area of the image to set the first endpoint of the second line.
6. Move the mouse to where the second endpoint of the second line will be.
7. Left mouse click on the area of the image to set the second endpoint of the second line. The angle measurement will appear.
8. To place the angle text in this default position left mouse click on the same point again. To move the angle text out of the way, move the mouse to the desired location and left mouse click to set the placement.

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Heart to Lung Ratio Annotation

Used to find the heart to lung ratio.

1. Select the Heart to Lung Ratio button on the annotations toolbar.
2. Left mouse click on the area of the image to set the first endpoint of the first line.
3. Move the mouse to where the second endpoint of the first line will be.
4. Left mouse click on the area of the image to set the second endpoint of the first line.
5. Left mouse click on the area of the image to set the first endpoint of the second line.
6. Move the mouse to where the second endpoint of the second line will be.
7. Left mouse click on the area of the image to set the second endpoint of the second line. The ratio measurement will appear.

Center Line Annotation

Used to find the center line of four points.

1. Select the Center Line button on the annotations toolbar.
2. Left mouse click on the area of the image to set the first point.
3. Left mouse click on the area of the image to set the second point
4. Left mouse click on the area of the image to set the third point.
5. Left mouse click on the area of the image to set the fourth point. The center line of these four points will be drawn on the image.

Center Point

Used to find the center between two user settable points.

1. Select the Center Point button on the annotations toolbar.
2. Left mouse click on an area to set the first point (it will appear as an X).
3. Left mouse click on an area to set the second point (it will appear as an X).
4. A third, large X will appear in the center of the two other Xs.

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Probe

Used to view the X & Y pixel coordinates and the gray scale value for the point.

1. Select the Probe button on the annotations toolbar.
2. Move the mouse to the desired point.
3. Left mouse click and hold, and the X & Y coordinates and gray scale value will be displayed.
   Note: While holding down the left mouse button, the user can drag the mouse pointer and the values will change.

Scale

Used to indicate measures (like increments on a ruler) on the top, bottom, or sides of the image.

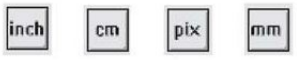
1. Select the Scale button from the annotations toolbar.
2. Set the desired parameters in the dialog box.
3. Click OK, and the measures will appear on the image.

Templates

Used to load and draw custom templates.
Select the Templates T button on the annotations toolbar.

Measurements Units

Used to toggle between the current measurement units.



Delete All Annotations

Used to permanently remove all annotations from the currently selected images.
Select the Delete All Annotations ☒ button.

Deleting Annotations Individually

1. Select the annotation.
2. Right mouse click on the annotation.
3. Select Delete from the pop up menu.

Selecting Annotations

1. Move the mouse over the annotation. The mouse pointer will become a pointing hand.
2. Left mouse click on the annotation to select it. The annotation will become a dotted line with several handles.

Moving Annotations

1. Select the annotation.
2. Move the mouse over the annotation onto any part of it except the handles (i.e. small boxes). The icon will change to the moving annotations icon.
3. Left mouse click on the annotations and drag it anywhere on the image.

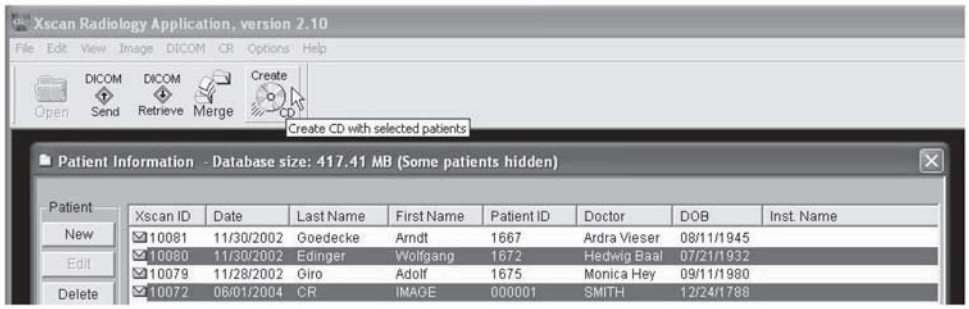
Resizing Annotations

1. Select the annotation.
2. Move the mouse over the annotation (onto any of the handles). The icon will change to the resizing annotations icon.
3. Left mouse click on the annotation handle and drag it anywhere on the image.

Note: For measurement annotations the size/angle will change accordingly. One of the handles provided for measurement annotations will also allow the user to reposition the text.

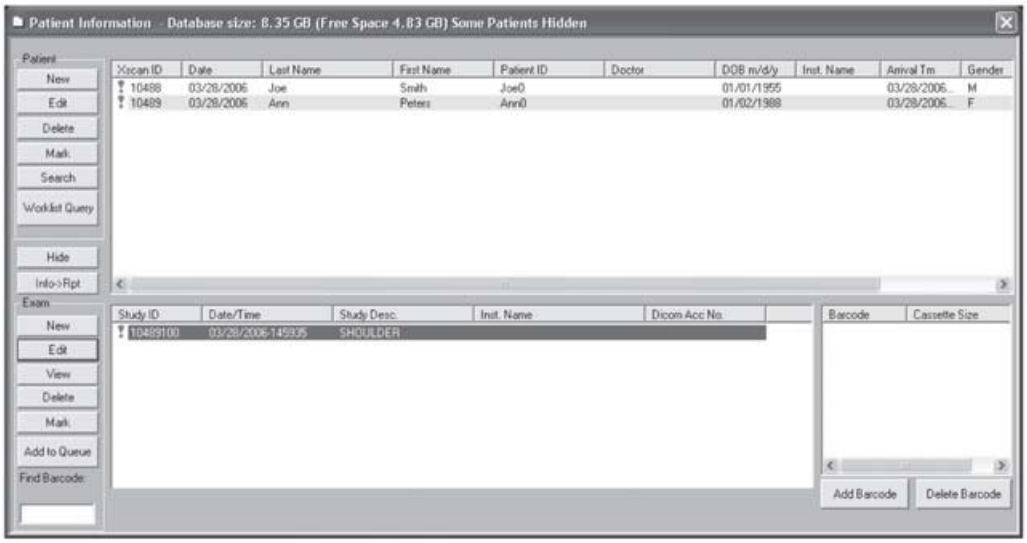
9.5 Patient CD/DVD Creator

1. In the patient information window select the patient(s) to be placed on the CD/DVD. To select multiple patients hold down your Ctrl key on the keyboard and using your left mouse button select each patient.
2. Click on the Create CD button in the toolbar. Selected patients will be copied into the patient CD layout folder (C:\XscanCDFolder).


Xscan Radiology Application, version 2.10
File Edit View Image DICOM CR Options Help
Open
DICOM Send
DICOM Retrieve
Merge
Create CD
Create CD with selected patients
Patient Information - Database size: 417.41 MB (Some patients hidden)
Patient
New
Edit
Delete
Xscan ID Date Last Name First Name Patient ID Doctor DOB Inst. Name
10081 11/30/2002 Goedecke Arndt 1667 Ardra Vieser 08/11/1945
10080 11/30/2002 Edinger Wolfgang 1672 Hedwig Baal 07/21/1932
10079 11/28/2002 Giro Adolf 1675 Monica Hey 09/11/1980
10072 06/01/2004 CR IMAGE 000001 SMITH 12/24/1788

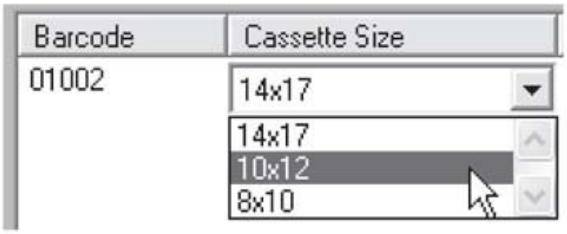
Note: If this is the first time using the patient CD creator feature a prompt will appear indicating the user to browse for the location of the DVD/CD Creator software. Alternatively, if Nero software is already installed on the PC - Select the option "Use Nero scripting to create CD/DVD."

9.6 Associating a Barcode with a Study



1. In the patient information window enter patient and study information.
2. Select patient and study.
3. Select Add Barcode button.
4. Using a barcode reader, scan the barcode of an unexposed cassette.
5. The barcode will be added into the barcode list with the default cassette size 14x17.
6. Repeat steps 3 to 5 for each cassette that will be associated with the study.

Note: The user can change the cassette size by clicking under the column Cassette Size and selecting the actual size. This will be saved for future use in the database.



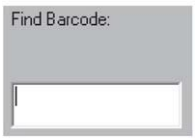
Note: The user can remove the association by selecting the barcode from the list and selecting the Delete Barcode button.

9.7 Finding Barcodes and Scanning Images

1. In the patient information window select the Find Barcode edit box.
2. Using a barcode reader, scan the barcode of the exposed cassette.
3. Select the anatomy information for the study.

   Note: This can be corrected later in QPC XSCAN32 when viewing the images.
4. Load cassette into the VERTX unit.
5. Select the appropriate scan button.

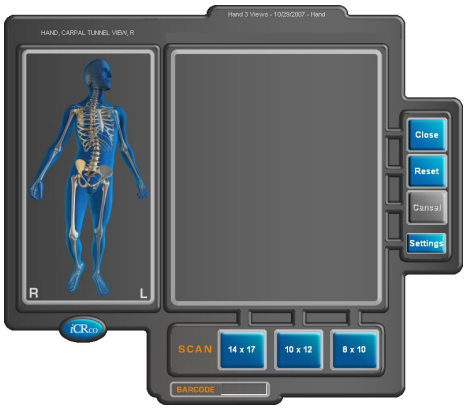
QPC XSCAN32 will automatically open the study that the cassette is associated with. The scan interface will open with the details of the associated patient.



The image will be imported into QPC XSCAN32 when it has completed scanning. The association with that cassette barcode and the study will be removed and the cassette can be reassigned to another patient.

Other Tips

The scan interface also allows the user to find barcodes in the database. The patient information displayed in the scan interface will change depending on the barcode selected for scanning.



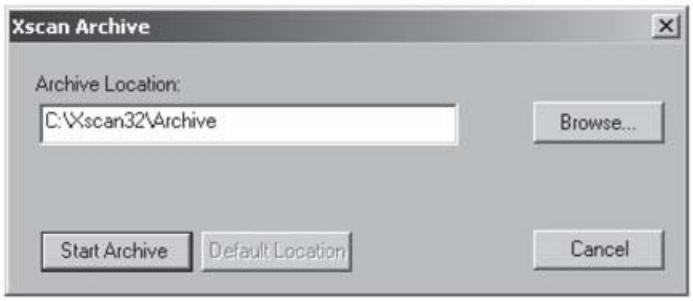
The image below indicates that the image will appear under the patient Joe Smith and the barcode for the cassette that will be scanned is 01003.

There is an option in the scan interface settings that requires the user to scan the barcode before they are able to scan cassettes into the interface. In other words they have to tell the scan interface which barcode they are scanning. If no barcode has been selected for scanning the user will be prompted to find a barcode.

9.8 Archiving QPC XSCAN32 Database

1. Open QPC
2. Go to *File* → *Archive Database*.
3. The user is asked to confirm the archive process.

4. Select the location to archive the database to.



5. When archiving is completed a message will appear informing the user of the archive location.
   Note: the current date and time is used for the folder name of the archived database.

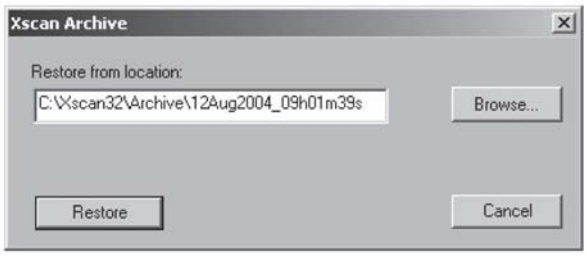
9.9 Restoring Archived Database

⚠ WARNING: *i*CRco strongly recommends backing up data to non-spinning media CD/DVD or an archive (PACS) with RAID capability to ensure no loss of data.

1. To restore an Archive click on Restore Archive in the File menu.
   Note: The current database in QPC must be empty.

Archive Xscan
Archive (C:\Xscan32\Archive\24Aug2004_09h12m28s) is now complete. The serial number of your dicom module will be changed.
If using external storage media use the following label for future reference:
'24Aug2004_09h12m28s'
OK

2. Select the location of the database to restore.



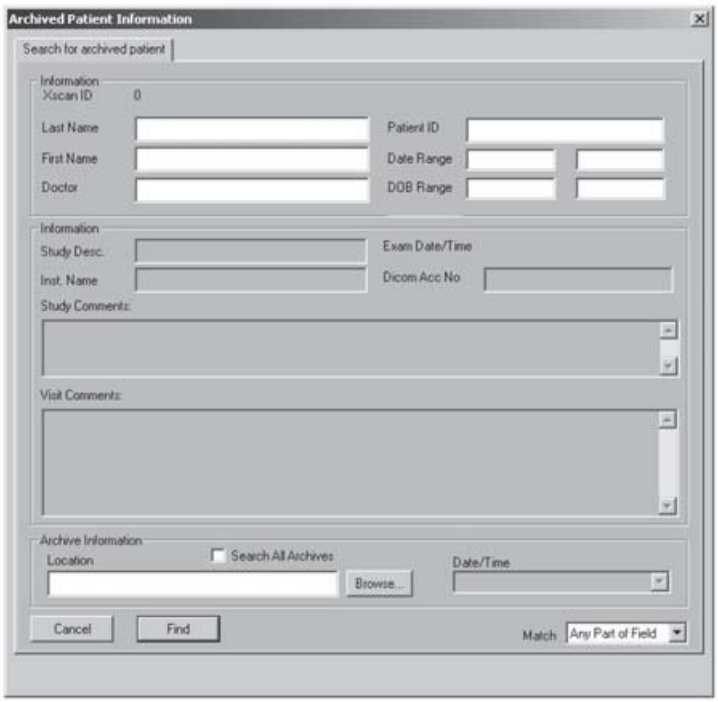
9.10 Searching QPC XSCAN32 Archive

1. Click on File menu.
2. Click on Search Archives.
3. To search a particular archive, select the archive location by selecting the Browse button. i.e. select C:\ XSCAN32\ Archive\
4. Under Date/Time select from the list of valid archives

5. The user can either:
   (a) Select Find to open the entire database.

(b) Enter search values into the patient information fields. If the database contains a patient or multiple patients that match the criteria the database will be opened with the patient(s) selected. If the patient(s) could not be found you will be returned to the search dialog. For example, the user could enter "Th" in the First name field to find values such as "Thomas" and "Thelma".

6. The user can refine the search further by changing the Match field.



9.11 QPC XSCAN32 Keyboard Shortcuts

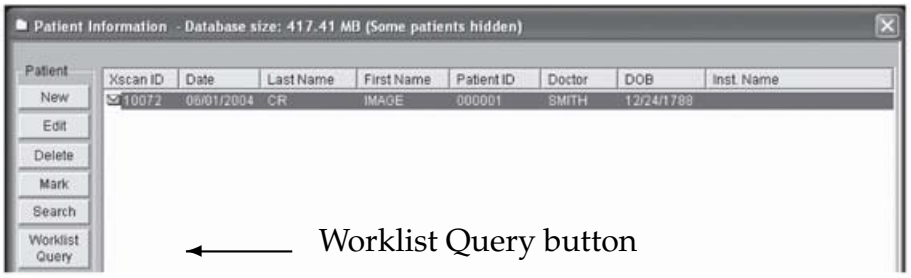
Function Keys

F1	Rotates an image clockwise.
F2	Rotates an image counter-clockwise.
F3	Horizontally flips an image.
F4	Vertically flips an image.
F5	Inverts an image.
F7	Opens and closes the Window/Level dialog.
F8	Opens and closes the CR Processing dialog.
F9	Resets the window/level of an image to the original window/level setting.
Shift + F8	Opens and closes the Annotations dialog.
Ctrl + F8	Turns the patient information overlay on and off.
F11	Opens QPC XScan32 Help.

F12	Selects and deselects all image icons.
Ctrl + A	Selects and deselects all image icons.
Ctrl + D	Deletes the selected image icons.
Shift + P	Opens preferences.
Shift + S	Adds images to the send queue.
Ctrl + S	Sends queued images.
Shift + Q	Adds images to the send queue and sends the queued images.
Shift + R	Imports received images immediately.
Right Arrow	Moves to the next image.
Left Arrow	Moves to the previous image.
Down Arrow	Moves to the next row of images.
Up Arrow	Moves to the previous row of images.
Page Down	Moves to the next page.
Page Up	Moves to the previous page.

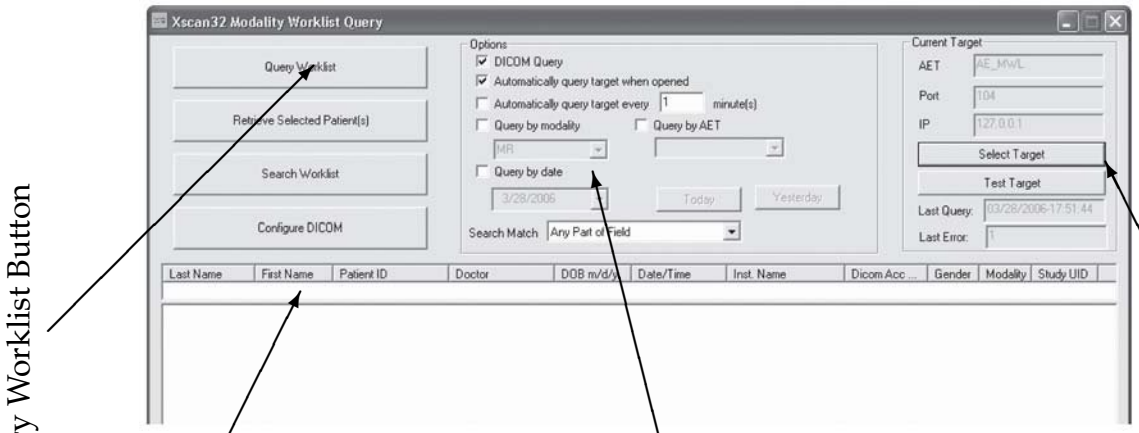
9.12 Modality Worklist Query

Note: For more information, please refer to the software section on creating patients.



1. To activate the Modality Worklist Query interface click on the Worklist Query button in the QPC XSCAN32 patient information window.

2. The QPC XSCAN32 Modality Worklist Query dialog will open. Click on Query Worklist button to query the HIS/RIS system.



Query Worklist Button

Search fields. For example, to search for all patients with the last name Smith - select the Last Name field in the search box and type Smith and then click enter. Only the patients that have a last name of Smith will appear.

The user can also specify query options such as:

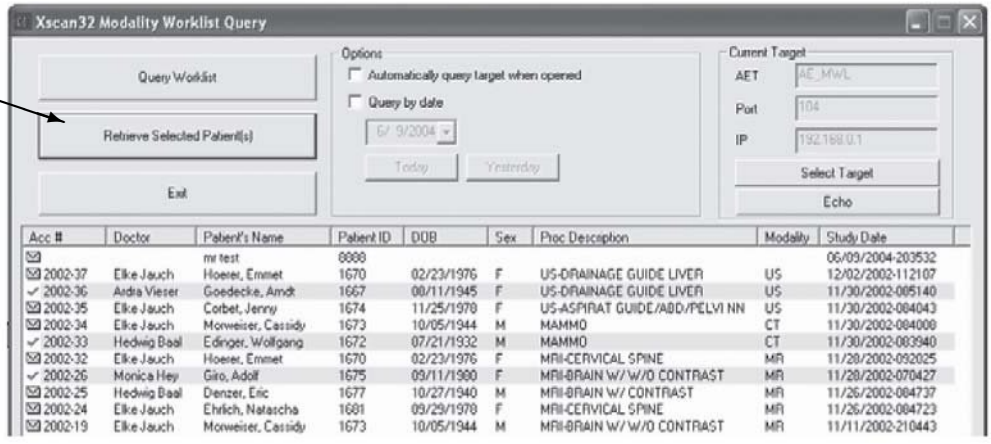
- querying automatically when worklist query dialog is opened.
- query on a timer (i.e. every 5 minutes)
- query by modality (i.e. CR patients only)
- query by AET
- query by Date (i.e. today's date only)

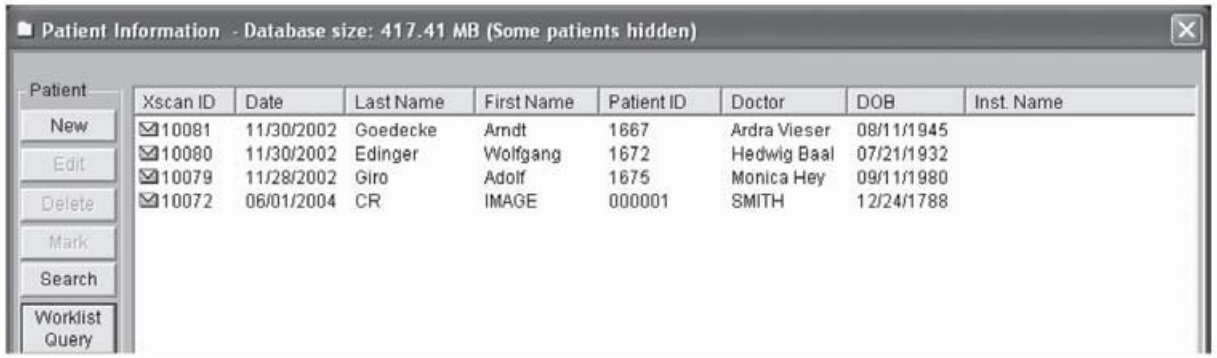
Click here to select the target to query. Note: The user will only need to do this once.

3. The queried patients will appear in the patient list. Click on Retrieve Selected Patient(s) button to retrieve the patients into XSCAN32 database.

Retrieve Selected Patient(s) button.

Queried patients appear in the patient list. An envelope indicates a patient that has not been retrieved. A check mark indicates a patient that has been retrieved.

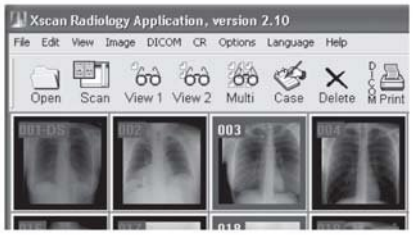

Xscan32 Modality Worklist Query
Query Worklist
Retrieve Selected Patient(s)
Exit
Options
Automatically query target when opened
Query by date
Today
Yesterday
Current Target
AET
Port
IP
Select Target
Echo
Acc #
Doctor
Patient's Name
Patient ID
DOB
Sex
Proc Description
Modality
Study Date
mr test
6888
06/09/2004-203532
2002-37 Elke Jauch Hoerer, Emmet 1670 02/23/1976 F US-DRAINAGE GUIDE LIVER US 12/02/2002-112107
2002-36 Andra Vieser Goedecke, Arndt 1667 08/11/1945 F US-DRAINAGE GUIDE LIVER US 11/30/2002-085140
2002-35 Elke Jauch Corbet, Jenny 1674 11/25/1970 F US-ASPIRAT GUIDE/ABD/PELVI NN US 11/30/2002-084043
2002-34 Elke Jauch Morweiser, Cassidy 1673 10/05/1944 M MAMMO CT 11/30/2002-084000
2002-33 Hedwig Baal Edinger, Wolfgang 1672 07/21/1932 M MAMMO CT 11/30/2002-083940
2002-32 Elke Jauch Hoerer, Emmet 1670 02/23/1976 F MRI-CERVICAL SPINE MR 11/28/2002-092025
2002-26 Monica Hey Giro, Adolf 1675 09/11/1980 F MRI-BRAIN W/ W/O CONTRAST MR 11/28/2002-070427
2002-25 Hedwig Baal Denzer, Eric 1677 10/27/1940 M MRI-BRAIN W/ CONTRAST MR 11/26/2002-084737
2002-24 Elke Jauch Ehrlich, Natascha 1681 09/29/1978 F MRI-CERVICAL SPINE MR 11/26/2002-084723
2002-19 Elke Jauch Morweiser, Cassidy 1673 10/05/1944 M MRI-BRAIN W/ W/O CONTRAST MR 11/11/2002-210443

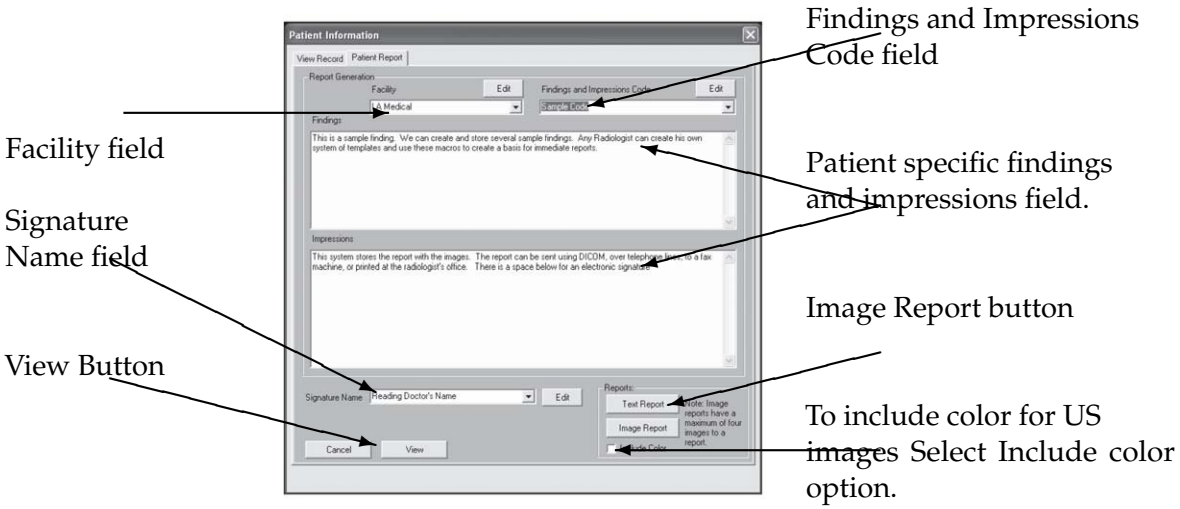


4. The patients will appear in the QPC XSCAN32 patient information window within seconds of being retrieved from the Modality Worklist Query dialog.

9.13 Report Writer

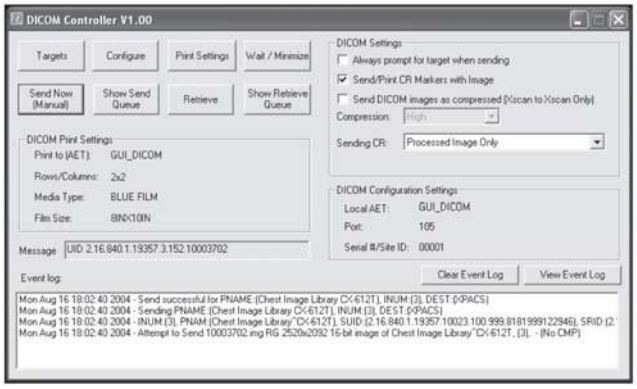
1. Open a patient study. Select the desired images to report. The user can have up to four images on one report (deselect all images if the user does not want to include any images in the report).
2. Right mouse click on the Case button in the toolbar.
3. Select existing or add a New Facility.
4. Select existing or add a new Findings and Impressions Code. Add patient specific information to the Findings and Impressions fields. Note: QPC XSCAN32 supports multiple page reports.
5. Select Signature Name for the reading doctors signature.
6. Click on the Image Report button
7. Click View button to view the report.


Xscan Radiology Application, version 2.10
File Edit View Image DICOM CR Options Language Help
Open Scan View 1 View 2 Multi Case Delete Print
003

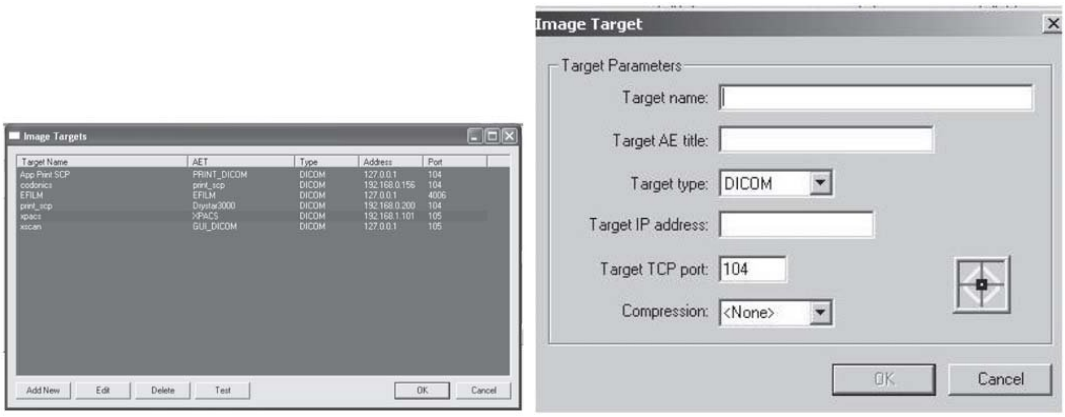


9.14 Setting Up DICOM Send

1. Open QPC XSCAN32.
2. Open DICOM Controller V1.00.
   Note: If the user does not have the window in the task bar open *Options* → *Preferences* → *Image Transfer Tab* → *Select Use DICOM to transfer images*.



3. Click on Targets button and the Image Targets dialog will appear.

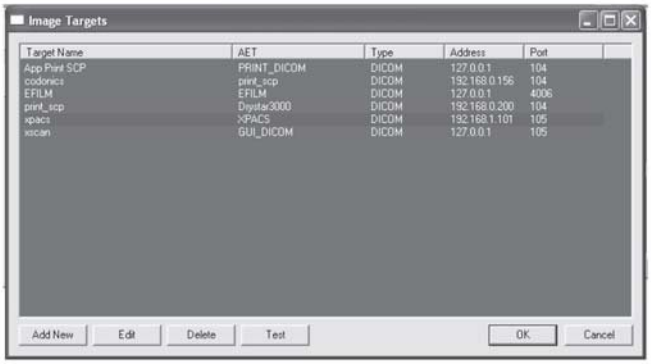


9.15 DICOM Send

1. Open a patient study for viewing and select the image icons to send.

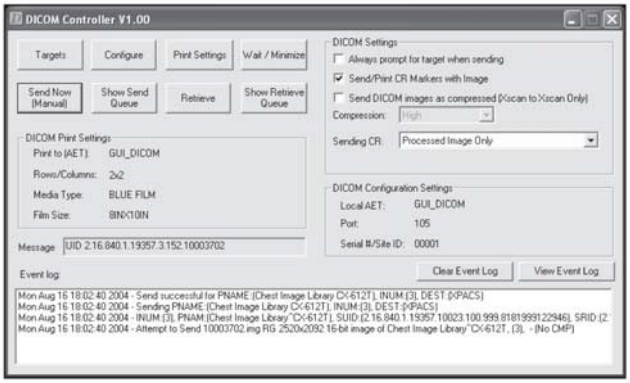
2. Click on the DICOM Send

button in the toolbar. Note: This will only appear in the toolbar when the "Use DICOM to transfer images" option is selected in the image Transfer preferences tab.



3. The Image Targets dialog will appear. Select the target(s) to send the selected images to.

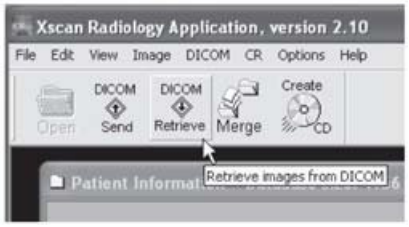
4. Select OK to confirm the selected target(s).



5. The status of the send will appear in the Event Log of the DICOM Controller window. Note: If sending to another XSCAN32 application the user can turn compression on and select a compression type (low, medium, high).

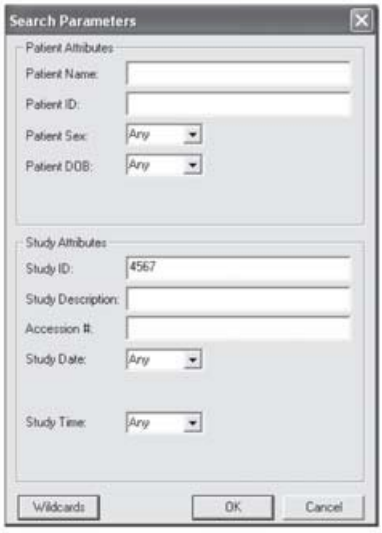
9.16 DICOM Retrieve

1. Open QPC XSCAN32
2. Click on the DICOM Retrieve button in the toolbar. Note: This will only appear in the toolbar when the user has the "Use DICOM to transfer images" option selected in the Image Transfer preferences tab.



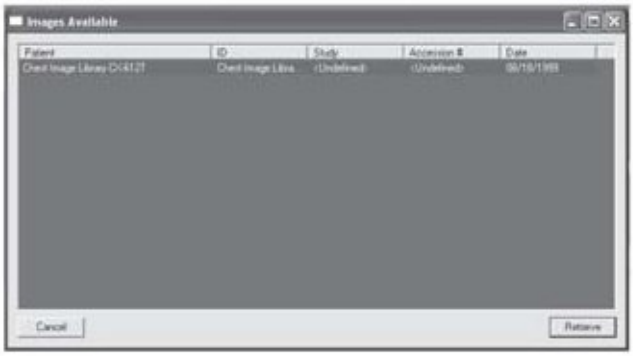
3. The Image Targets dialog will appear. Select the target to retrieve images from.
4. Select OK to confirm the selected target.

5. If the user has selected the Search Parameters option, then enter any relevant patient or study information. For example, to search on all patients with the name John Smith, type John Smith into the Patient Name field. To search on all patients with the last name Smith, type *Smith* into the Patient Name field. Where the asterisk * is used as a wildcard. To search on Study ID 12345, type 12345 into the Study ID field or 1234* to bring up all study ID's starting with 1234. Note: It is not necessary to fill out all fields. For a description of the valid wildcards click on the Wildcards button.



6. The list of matching patients will be returned.

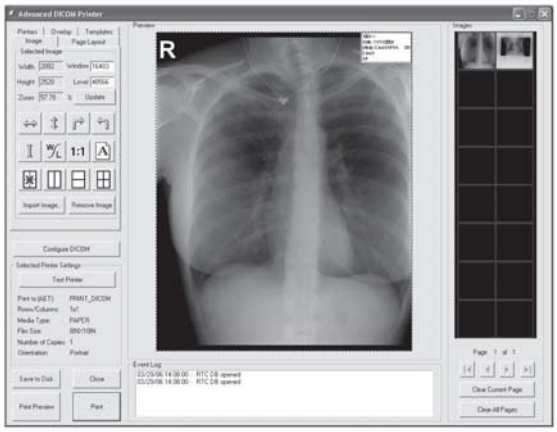
7. Select the patient(s) to retrieve from the list and click on the Retrieve button.



9.17 Advanced DICOM Printer

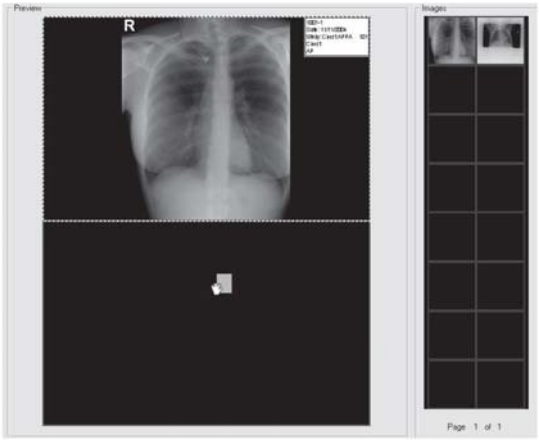
Select images for printing

In QPC XSCAN32 select the images to print in the image icon view and select DICOM Print from the toolbar. The Advanced DICOM Printer application will open with the selected images imported into the right hand side. Alternatively, the user can select the region in the preview window where the user wants the image and then select the Import Image button.



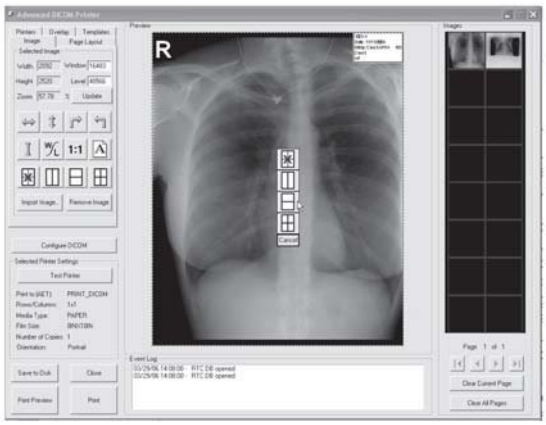
Drag and Drop Images

To drag images into the print region hold the left mouse button down on one of the image icons on the right hand side and drag it into the preview window. A dragging cursor will appear as the user drags the image from the image icon window to the preview window. If the user is out of the accepted region for dropping, a cursor will appear letting the user know that this is not a correct region to drop the image into.

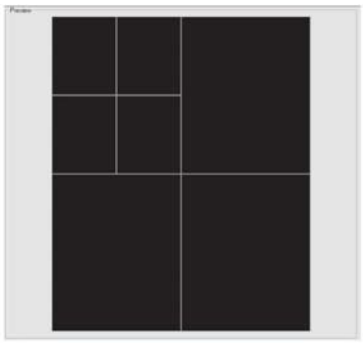


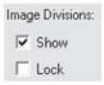
Split the preview window into regions

To split the preview window the user needs to first select the region to split. For example, if there are currently no divisions in the preview window then click anywhere in the preview window and a green line will appear around the window. This will enable the image division buttons. Alternatively, the user can press Shift+ right mouse button click inside the preview window region to split and a pop up menu will appear with these division buttons (as the image to the right shows).



Select one of the image division buttons and the preview window will be divided into regions. To split one of these regions again select the specified region and again select one of the image division buttons. The user can drag and drop images at any stage. If the user has an image in the region that is desired, the interface will automatically move the image into on eof the split regions. To remove a division, click in the region that has been split and click on the no-division button.

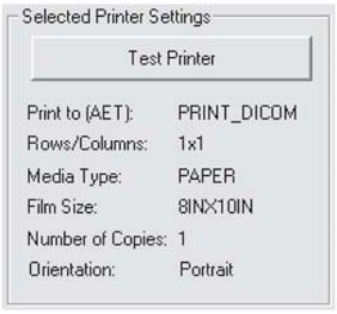




The user can show and hide the image divisions by clicking on the Page Layout tab and clicking Show and Lock under Image Divisions.

Set Print Settings (such as Printer AET, film size and type)

The user can view the currently selected print settings by looking at the left hand side of the Advanced DICOM Printer dialog. To change these settings, and to view more settings, click on the Printers tab.



Manipulate Images in the preview window

The Advanced DICOM Printer allows the user to flip, rotate, zoom, pan, invert and window/level images. To manipulate the images select the image in the preview window (the selection will be shown by the green box surrounding the image).

The user can flip, rotate and invert by using the buttons on the left hand side of the DICOM Printer dialog.

The user can zoom by using the right mouse button on the selected image.

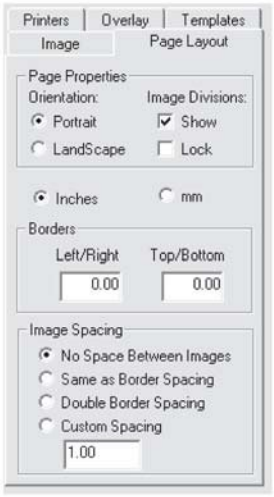
To pan the image use the left mouse button on the selected image. Note: The user can only pan the image when it is zoomed up.

To window/level the user can either use the middle scroll button on the mouse or alternatively, type the required window/level into the edit boxes on the left hand side of the Advanced DICOM Printer dialog and then press the Update button to change the window/level for the image.

The user can also press the 1:1 button to tell the Advanced DICOM Printer dialog to print images at 1:1 resolution.

The user can use the orientation button to change from landscape to portrait view.

Change margins



The margin tab permits the user to specify, in English or metric units, the size of the borders on the printed image. The top and bottom borders on the page can be adjusted independently of the borders for the left and the right hand side of the page.

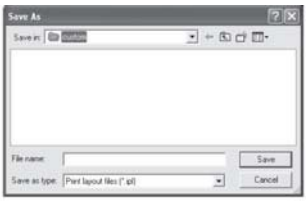
Additionally, the user has the option to control the internal margins, which define the amount of space left between individual frames on a page with multiple images. Internal margins are defined as multiples of the print page border size.

By default, internal margins are the same size as the borders, with image margins on, the left and right hand side of each frame are equal to the left and right hand borders, and margins on the top and bottom of each frame are equal to the top and bottom borders of the printed page.

If the user intends to cut individual frames out of the printed page, it is recommended that internal margins are set to twice that of the page, which will give a uniform border size on the individual image segments. If it is necessary to maximize the amount of space on the printed page, the internal margins can be turned off altogether.

Saving and Loading Print Layout

The templates tab allows the user to save and load pre-defined print layouts. There are five user defined layouts. Set up the layout on the preview window and then select one of the buttons labeled "Click here to save current layout!". The user will be prompted for a title.

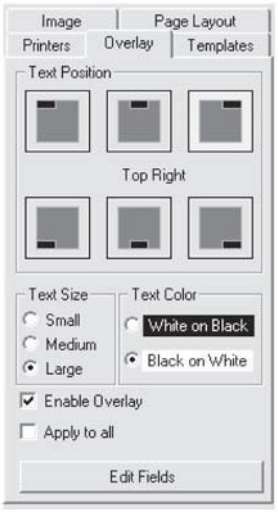


To save more layouts click on the Save Current Template button. here the user can set a file name for the Layout. The default save location is $C:\backslash XScan32\backslash Layout\backslash Custom$.

Adding patient demographics

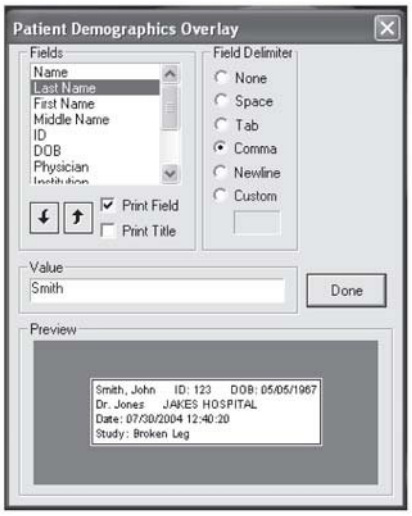
Select the overlay tab to bring up the patient demographic layout options.
From here the user can select:

- Text position (includes top left, top center, top right, bottom left, bottom center, bottom right),
- Text size (includes: small, medium, large),
- Text color (includes: white on black, black on white).



The user has the option to apply the current settings to every image in the print view or only in the currently selected image (i.e. via Apply to all images button and Apply to image button).

By selecting the Enable Overlay check box the user can turn patient demographics overlay on and off for all images. The user can also edit the fields that are available on patient demographics overlay by clicking on the Edit Fields button. From here the user is able to:

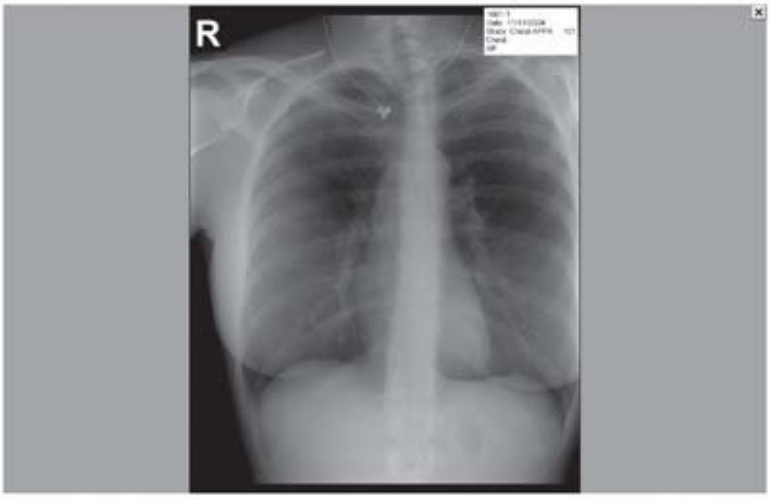


- Select a field and determine what kind of a delimiter following the field (includes: none, space, tab, comma, newline, custom).
- Change the position of the fields with the up and down arrows.
- Remove or display a field by selecting the Print Field check.
- Print the title for the field (i.e. the title "Date:" would be printed in front of the date field).

After editing the fields select the Done button.

Print preview

To see a print preview, select the Print Preview button.



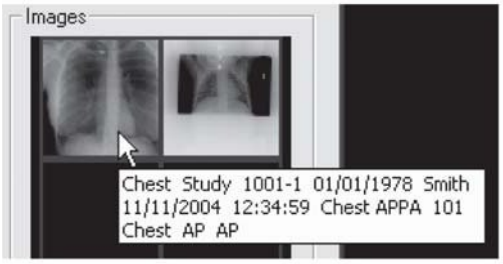
Print an image from DICOM Printer

When the user has finished dragging and dropping the desired images onto the preview window and manipulating size, position and window/level (if necessary) press the Print

button in the bottom left hand corner of the DICOM Printer dialog. Please ensure all the printer settings are correct first.

Patient Demographics for icons

When the cursor is over the icon bank Advanced DICOM Print will display the demographics for the image.



Multiple icon pages

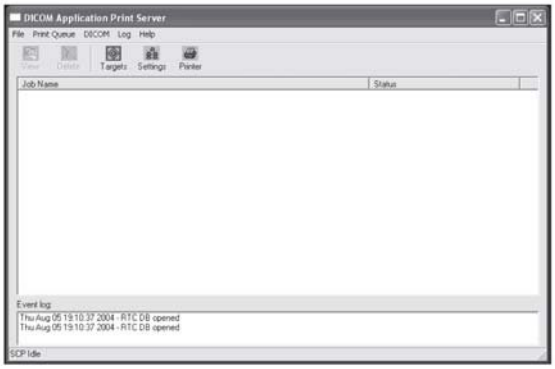
Advanced DICOM Print has an unlimited number of icons that can be loaded. However, the PC's memory is a restriction.

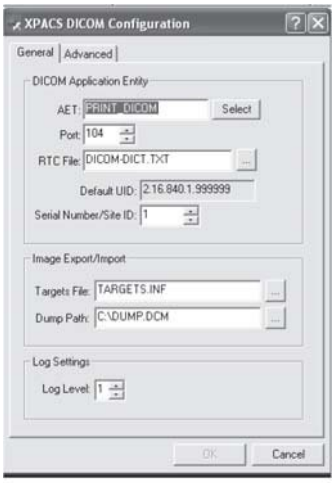
To clear the current page of icons click on Clear Current Page button. To clear all pages of icons and preview window click on Clear All Pages button.

To move between pages and move to first and last pages click on the arrow buttons.

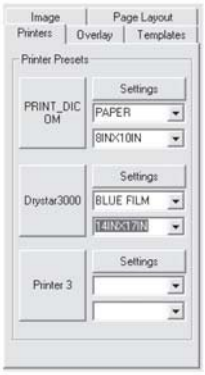
9.18 Printing to a Windows Printer

1. To setup QPC to open the DICOM Application Print Server go to Options→Preferences→Image Transfer Tab. Select the option Use Windows to DICOM Printer. DICOM Print must also be selected.





2. The DICOM Application Print Server will print to the default windows printer. I.e. Under windows control panel select "Set As Default Printer" to the desired printer. The print server uses this default printer.
3. To change the AET, port number or any other information for the DICOM Application Print Server click on the Settings button.
4. To print to the DICOM Application Print Server set the AET in the Advanced DICOM Printer to the DICOM Application Print Server's AET details.
5. Select the images in QPC XSCAN32 to print and then select the DICOM Print button. Optimize the images in the QPC XSCAN32 software and select print.



9.19 Troubleshooting Windows to DICOM Print

1. Make sure there is only one instance of them open in Task Manager. To open Task Manager (Click on Start Menu, Click Run, Type in "taskmgr", Click OK). Close QPC XSCAN32. Look for DCM.exe, DICOMMultiPrinter.exe, AppPrintSCP.exe. If any of these are open please select and click on End Process. Reopen QPC XSCAN32.

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2. Check target information for both applications (Advanced DICOM Print and DICOM Application Printer Server). Select Advanced DICOM Print and click on Configure DICOM button. The DICOM Configuration dialog will appear. The target details for this application are usually: AET: ADV_PRINT DICOM, PORT: 4008, IP: 127.0.0.1, Click on Select to see full details of this target. If Advanced DICOM Print has not been entered as an item in the targets list then please add it with the above details. Then select this new target and click OK. Click OK on the DICOM Configuration to save settings. Close QPC XSCAN32 and reopen Select DICOM Application Printer Server and click on Settings button. The DICOM Configuration dialog will appear. The target details for this application are usually: AET: PRINT DICOM, PORT: 3008, IP: 127.0.0.1, Click on Select to see full details of this target. If DICOM Application Printer Server has not been entered as an item in the targets list then please add it with the above details. Then select this new target and click OK. Close QPC XSCAN32 and reopen. Go to Advanced DICOM Print and Test Printer, assuming that you have the DICOM_PRINT target selected as the default printer to print to. To set it as the default, select the Printer tab in ADVANCED DICOM PRINT and select DICOM_PRINT button. Try printing. If fails recheck that multiple instances are not open in task manager.

3. Make sure no options are selected that should not be selected. If the printer does not support border properties then deselect. If the printer does not support background properties then deselect. If the printer does not support 12-bit images then deselect. Try printing. If fails recheck that multiple instances are not open in task manager.

4. Make sure correct print options are selected. If printing to a windows printer you cannot have BLUE_FILM selected (unless it has BLUE_FILM). You need to select PAPER. The default for a regular windows printer for paper size is 8Inx12IN. Try other options if this fails. If you have the wrong paper size selected it will bring up a failed message in DICOM Application Printer Server and the message log will say incorrect paper size.

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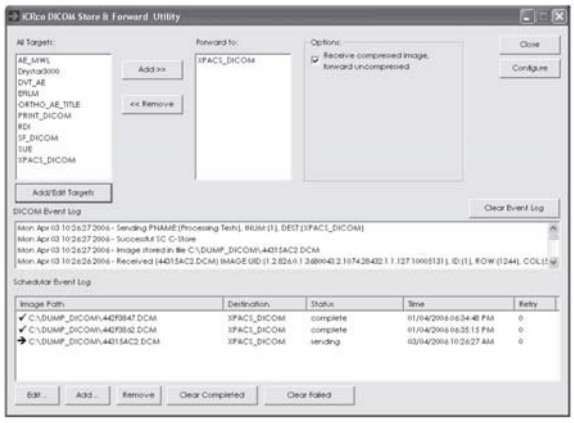
9.20 DICOM Store and Forward Utility

Setting up targets for forwarding

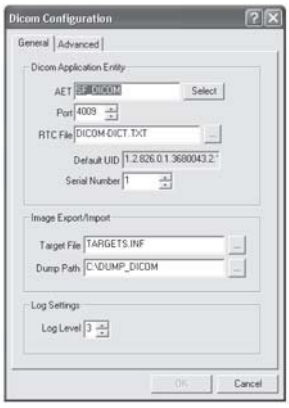


1. Under the All Targets list select the target(s) to forward.
2. Select the Add ≫ button.
3. To remove target(s) from the forward to list. Select the target under the Forward to list and click on the ≪ Remove button.

Configuring Store and Forward Utility DICOM settings

1. Select the Configure button.
2. The default DICOM settings are:

- AET SF_DICOM
- Port: 4009



Sending to Store and Forward Utility

1. From the sending application select the images to send.
2. Then Select the Store and Forward Utility as the DICOM target to send to I.e. AET of SF_DICOM. (The images will appear in the Scheduler Event Log.)
3. The Store and Forward Utility will keep retrying to send images if failed.
4. The status will be updated with sending, complete or transfer pending.

Options

The Store and Forward Utility defaults to receiving compressed images and forwarding them on decompressed. If you want to receive compressed images and send them on

compressed to the PACS system then deselect the option Receive compressed image, forward uncompressed.

Note: The Store and Forward Utility may report the status as complete but the PACS system may still reject the image. If the image has an incorrect DICOM tag or it is a duplicate study, series or image UID. Always confirm that the PACS system has received the image before deleting images from the capture station.

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